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THE

ABERNETHIAN SOCIETY

ST BARTHOLOMEW'S HOSPITAL.

REPORT OF PROCEEDINGS.

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THE ABERNETHIAN SOCIETY having determined in Special Meeting that it was advisable to publish a Report of its Proceedings, appointed a Committee to carry the project into effect. The Committee therefore drew up the following Rules, which were accepted by the Society at the General Meeting:—

1. With the approval of the Editors (of the Hospital Reports), that the Proceedings of the Society should be published in the Hospital Reports as heretofore, but in more detailed form, and that afterwards reprints should be thrown off for distribution among its Members.
2. That the papers for publication be selected by a Committee consisting of the two Presidents, two Vice-Presidents, two Hon. Secretaries, and the Hon. Treasurer.
3. That the reprints shall be stitched in the form of a pamphlet, and shall contain a complete List of the Members of the Society for the last five years, and a table of contents shall also be provided, with a printed cover.
4. That copies be distributed, free of charge, to Members who are not of more than five years' standing, and that those of more than five years' standing may obtain copies on payment of one shilling each.
5. That these Rules be also printed in each copy of the Proceedings for the information of Members.

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commencement by impaired vision, and pain radiating over the side of the face. The photophobia is intense, and the tunics of the eye become deeply congested, and this is generally accompanied with a well-marked circumcorneal zone of vascularity.

Laqueur* says that 'stress should be laid on the *interruption* of vision as an early symptom of sympathetic ophthalmia.' After describing the ophthalmoscopic conditions seen in the early stages, and pointing out how the tension of the globe is increased, but afterwards becomes reduced, the question as to when the patient, subsequent to the receipt of injury, was to be considered free from the risk of this affection, was fully considered. The chief conditions liable to produce it are wounds, especially when involving the ciliary region, blows, &c.; foreign bodies, as splinters of steel or copper, lodged within the globe; and irritation, caused by degenerative changes occurring in eyes previously injured or diseased.

As concerning wounds and blows, of course these are the most common, and may be produced by blunt or sharp instruments. And it is an interesting fact to note that a clean-cut wound is even less likely to produce sympathetic ophthalmia when its direction radiates from the corneal margin than when it occurs parallel with its edge; for in the former case the ciliary nerves are less disturbed, while in the latter they are severed, contract upon themselves, and the free ends become entangled in the wound.

The risk, however, of the second eye sympathising is exceedingly great when a foreign body penetrates and remains lodged in the injured one—in fact, though we may be uncertain as to the presence of the offending substance, the eye must be kept most closely under observation.

The irritation caused by degenerative changes, &c., was then spoken of, and details of several cases given in which bone had been developed in the interior of the eye.†

It is in consequence of this development of bone, therefore, that years after an injury has been received, if it should be necessary to operate upon one eye for the purpose of relieving the irritation existing in the other (the vision of the injured one being quite lost), an excision, not an abscission, should be performed.

The writer next referred to the explanations that are at present given concerning the manner in which sympathetic ophthalmia is brought about, and after running briefly over the anatomy of the orbit and its contents, went on to say, 'Granting that the disease is produced by irritation conveyed through the medium of the nerve supply, however much the vascular arrangement is secondarily disturbed, it seems altogether improbable that the sympathy that occurs is due to the close relationship that the two optic nerves bear to each other.'

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* See Biennial Retrospect of Medicine and Surgery of the Sydenham Society, 1869-70, p. 352.

† See diagrams, &c., by Mr Hulke, in Patholog. Soc. Transactions, vol. vii. p. 320.

In support of this it must be remembered that actual blindness is the last symptom that occurs.

Again it has been noticed that eyes which suppurate do not produce this affection, and upon this principle it is that Von Gräfe used to pass a seton through a lost eye to make it suppurate, and thus do away with the chance of sympathy. The explanation given by him was that the suppurating process destroyed the ciliary filaments, and hence cut off the medium through which the irritation passed.*

Considering, then, the present state of our knowledge upon this subject, Mr Stowers thought that the most probable explanation is, that the irritation is conveyed directly by the ciliary nerves to the lenticular ganglion, then back to the fifth nerve, and finally reflected upon the other side. More than this is not known.

As to the treatment required, consider—

1st. How to arrest the progress of the disease.

2d. How to deal with an eye which remains damaged after the disease has been arrested.

To arrest the progress of the disease the cause must be removed—foreign bodies, &c., extracted—leeches and counter-irritation applied to the temple; if necessary, atropine solution and local sedatives freely used. Occasionally the performance of an iridectomy may be followed with benefit if adopted early; but if late, the iris is found adherent and rotten, will tear when pulled, and in fact the operation itself may produce additional irritation. When, however, the iris is in a quiet condition, after the acute symptoms have passed away it becomes very tough.

Complete rest and subdued light are essential. Give quinine in gr. ii. or gr. iii. doses three times a day to keep up the powers of the patient, and food and stimulants may be ordered at the discretion of the surgeon. With regard to the manner of removing blood locally, the writer said he considered the artificial leech was by far the best appliance.

To fulfil the second indication little can be done. If synechiæ are present, for the reasons already given the performance of an iridectomy is unsatisfactory; but it may be required as well as extraction of the lens. Tonics with fresh air should be prescribed, and atropine applied.

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* See also Stellvag von Carion's work on the Eye, p. 230.

October 30.

Dr Moore read cases of abdominal tumour.

Messrs Andrews and G. S. A. Ranking also read cases.

November 5.

Mr Jepson exhibited a vesical calculus of uric acid removed from a female patient by rapid dilatation of the urethra.

Dr Moore read a paper upon 'Pleurisy.'

Physicians, he said, have been acquainted with pleurisy from the earliest times. The name is as old as the Aphorisms of Hippocrates. The ancients observed the general features of the disease and some of its minutiæ. Hippocrates describes the clubbing of the fingers in empyema; Aretæus the diarrhœa which often accompanies it. But a great part of the old writings on pleurisy has little value now. They fail to distinguish between pleurisy and pneumonia; in some cases even between varieties of phthisis and pleurisy. They frequently attribute effects to pleurisy which were obviously due to some other lesion, and particularly to the varieties of renal disease. In short, till Auenbrugger, the inventor of percussion, no physician was in a position to diagnosticate pleurisy with accuracy. Auenbrugger's method was for a time neglected, and accurate knowledge of pleurisy begins with Laennec. This physician, who has made the greatest advance in medicine since the science was founded in modern times by Sydenham, has treated of pleurisy in a style worthy of so great a master. Every student should read Laennec's chapters.

Treating pleurisy altogether from a clinical point of view, Dr Moore reduced his opinions to eight aphorisms.

1. A pleurisy is said to be present when a person labours, or has since his taking ill, laboured under an acute continual fever with pain in his side on inspiration, and with some of the following physical signs:—
    (1.) Distension of the chest-wall.
    (2.) Dulness on percussion.
    (3.) Friction-sound.
2. Pleurisy varies in degree, in extent, and in duration. It may occur as an original disease or as a complication.
3. Pleurisies may be classified into those—
    (1.) Without change in the shape of the chest.
    (2.) With extensive bulging of the chest-wall.
    (3.) With shrinking of the chest-wall.
4. Pleurisy affects all ages.
5. A sudden chill may cause it, but more often its cause is unknown.

6. A pleurisy terminates in a cure, in other diseases, or in death.

7. It may get well in three ways—
(1.) Without effusion.
(2.) By absorption of effusion.
(3.) By emission of effusion.

8. The methods in which nature cures a pleurisy are the guides to its treatment.

The indication for treatment is the condition of the chest-wall. Where this is not materially altered, warm applications to the side and purgatives should be used.

Where this is considerably altered, paracentesis is indicated.

The third variety of pleurisy (aphorism 3) is to be treated with cod-liver oil, iron, bark.

These aphorisms were illustrated by notes of about forty cases observed in the Hospital.

November 13.

Mr Jepson read a case of fracture of left frontal bone in a boy 3½ years old, in which trepanning was resorted to on the seventh day, and death took place on the fourteenth, the temperature having previously risen to 106° Fahr.

Messrs Cretin and Day also read cases.

Dr Moore gave the notes of a case of intestinal obstruction which had terminated fatally, and exhibited a portion of the intestine removed after death. The specimen showed that there was a constriction about 2¼ feet above the ileo-cæcal valve which hardly admitted the tip of a finger. The mucous membrane was much ulcerated. Close to the narrowing, on the ileo-cæcal aspect, a diverticulum, 2 inches long, was found, which had constricted the ileum 7 inches nearer the valve than the ring.

November 20.

Dr Moore exhibited a heart with narrowing of the aorta at the junction of the ductus arteriosus. In addition, the pulmonary artery came off behind the aorta, the orifice of it was a cartilaginous ring, without valves, of goose-quill size. The fleshy columns of the mitral valve arose in the right ventricle, into which the left ventricle opened. Cavity of left ventricle was little bigger than a walnut.

Mr Marsh read a paper on the 'History of Lithotomy.'

Apart from the main object of recalling to mind the various steps by which our present method of lithotomy had been arrived at, the author's wish, in selecting the subject of his paper, was, in the first place, to insist on the value of history in the various branches of medicine and surgery. An acquaintance with what had been already done was useful to all; it was quite indispensable to those who aimed at achieving any improvement, or advance in any part of our work. And such a study would prove not only profitable, but very interesting; for amongst the old classics in medical literature there were many whose style was remarkable for its vigour, purity, and graphic power. Of this Cheselden himself, in whose doings every surgeon had so keen an interest, might be cited as an illustration, for his language and style were both admirable. Then turning to lithotomy, the author briefly referred to the earliest traditions of the operation which had come down to us from what may be termed its pre-historic period, during which it was practised, probably for many centuries, by the quacks among the ancient Arabians. He traced the various links which connect the earliest method—that of 'cutting upon the gripe,' otherwise termed the 'Lithotomia Celsiana'—with the present lateral operation. In doing this he made a passing reference to the curious fact that Hippocrates, in common with all the old writers on medicine, including Avenzoar, one of the orthodox persuasion among the Arabians, denounced the operation in the plainest terms. Hippocrates, the 'father of surgery,' did not even mention lithotomy in any of his treatises—although there was clear evidence that he was familiar with all the larger operations which were then included in legitimate surgery—but he passed a strong condemnation upon it in his celebrated oath, which he imposed upon his pupils before they left him for independent practice. He bound them to 'undertake to give no deadly medicine to any if asked, and not to suggest any such counsel; to give to no woman a pessary to procure abortion; and not to cut any person labouring under the stone, but to leave this to be done by men who were practitioners of this work.' It would be remembered that lithotomy continued to be practised by non-professional persons until quite recent times. It was performed by the village quacks in the remote districts of Scotland not more than two centuries ago. A remnant of this state of things was found in the minute-books of St Bartholomew's Hospital. It was resolved, by the Governors, on January 22, 1622, that a gentleman named Mullins, 'in consideration of the care and pains he took in cutting and curing poor diseased persons of the stone,' should receive the yearly stipend of thirty pounds 'so long as he discharged his duties to the liking of the said Governors.' Indeed, until within the last ten years the old method of payment was still followed, and each surgeon of the Hospital received ten pounds annually for doing this particular operation.

In the course of his remarks, the author described the steps of the Celsian method, and mentioned that this mode of operating was subsequently contemptuously termed the 'Apparatus Minor' by the advocate of the Marian operation, or so-called 'Apparatus Major,' by which designation they boastfully indicated the grand array of instruments required in its performance.

He then compared the Celsian with the Marian operation. The principle of the former was to cut freely into the neck of the bladder—that of the latter to cut as little as possible, and to procure the necessary opening into the bladder by what they termed dilatation, but which really was a terrible process of laceration, or rending of all the tissues concerned. This Marian operation was, perhaps, the most mischievous error ever introduced into surgery; and although it was practised for many years by the most celebrated surgeons of the sixteenth century, it was at length completely and finally abandoned, both in principle and practice, and there was nothing in our present system which had been even remotely derived from it. On the other hand, it was shown that by successive steps the operation of Cheselden had been derived by direct descent from the Celsian method. The history of Joannes de Romanis and Sanctus Marianus Barolitanus, of Frere Jaques and Rau and Cheselden, was briefly traced, and the peculiarities of the method of each pointed out. Among these celebrities, the names of Frere Jaques and Cheselden must always stand pre-eminent. Frere Jaques, modifying the Celsian proceeding, first by cutting with one bold plunge directly into the bladder, and subsequently by employing a grooved staff to guide his knife, really founded lateral lithotomy. Cheselden's part lay in perfecting and refining upon the method of Frere Jaques, and establishing it securely on the principles of anatomy and scientific surgery. The name of Rau of Amsterdam was mentioned for a warning. Although undoubtedly a great and accomplished surgeon, and a skilful operator, he was guilty of a meanness that drew him, according to many of his contemporaries, into a crime. He copied the improved method of Frere Jaques, and performed it in a manner that soon won for him a European celebrity; but he neither allowed Frere Jaques the credit of the invention, nor would he disclose the secret of his brilliant success. On the contrary, he even permitted a mistaken account of his proceeding to be published by Albinus, who was then his pupil and assistant, and who believed he had discovered what Rau persistently declined to divulge. The result of this act of Rau was to lead Cheselden and many other surgeons into the performance of an operation which speedily proved fatal to a majority of their patients. From the evidence contained in the account of John Bell, and in the writings of Rau's contemporaries, it seems impossible to acquit him either of meanness and cruelty in his treatment of Frere

Jaques, or of having held his tongue from motives of interest, when it was his first duty to inform all the surgeons, who were so anxious to learn it, the secret of his notorious success.

The author next gave an account of the different steps by which Cheselden arrived at the method which has made him so famous.

Upon this subject there had rather strangely arisen a confusion in many accounts that were published. It was stated that Cheselden, after having wounded the rectum in two of his earlier operations, in which he cut into the bladder from without inwards, had finally altered his proceeding, and determined to cut from within outwards—that is, by entering his knife just behind the prostate, and cutting forwards through the prostate to the membranous portion of the urethra. But it would be found, from a paper by Dr Yelloly in the fifteenth volume of the 'Medico-Chirurgical Transactions,' that Cheselden's final method undoubtedly was precisely similar to that which was now almost universal in England.

In conclusion, it was mentioned as a fact which all St Bartholomew's men should be proud to remember, that lateral lithotomy was first performed in England by Dr Bamber of St Bartholomew's Hospital. Bamber and Cheselden received Albinus's account of Rau's operation at the same time, and agreed to practise it on the first convenient occasion: and Bamber operated at St Bartholomew's a few days before Cheselden did at St Thomas's.

November 27.

Dr Moore showed a dense cancerous tumour around the root of the right lung, while the left was studded with tubercle. The liver was full of cancer.

Mr Keetley read a paper on 'Acute Rheumatism, with cerebral symptoms and excessively high temperature.'

December 4.

Dr Moore showed the brain, heart, and kidneys from a fatal case of cerebral hæmorrhage. Clots were found in the left lateral, fifth, third, and fourth ventricles. There was also an extensive effusion of blood under the arachnoid, covering the cerebellum and posterior part of cerebrum. The aorta was atheromatous and the kidneys normal.

Mr Stowers exhibited microscopic specimens of the fungus in tinea tonsurans; the hair in porrigo decalvans (not parasitic) and the acarus scabiei.

Mr Butlin read four cases bearing upon wounds of nerves.

December 11.

Mr Steavenson read an account of a fatal case of laryngeal tumour.

Mr Watts read a case of death from fractured base of skull.

Mr Taylor showed the tongue, liver, great omentum, and pelvic organs of a man who had had jaundice and xanthelasma. Hydatid cysts were found in the liver and most of the viscera.

January 15, 1874.

Dr Duckworth read a paper upon 'Some Forms of Hepatic Enlargement,' which will be found at page 25.

January 22.

Mr Furner showed two stomachs, one with malignant disease of pylorus, the other with a cicatrised ulcer, by the bursting of which and subsequent peritonitis death had resulted.

Mr Wharry read a paper on 'Gastric Ulcer.'

January 29.

Dr Moore showed a diseased heart, dilated and hypertrophied. The mitral valve had its cusps soldered together, so as to cause both obstruction and incompetence. The aortic valves also were thickened and incompetent.

Mr Walsham read a paper on the 'Entrance of Air into Veins,' and advised the treatment of such cases by the artificial inspiration of oxygen.

February 5.

Dr Moore showed a heart exhibiting stenosis of mitral and tricuspid, with obstruction and incompetence of aortic, valves.

Dr Hollis read a paper on 'Bacteria.'

The writer alluded to the close relations which exist between the processes of fermentation and putrefaction, and to the grounds there were for supposing that these processes were due to the presence of extremely minute living organisms. Cagniard Latour in 1836 announced that fermentation was induced by the presence of an organised body. Schwann, Gay-Lussac, Appert, and Pasteur investigated the process. The last-named physiologist made it probable that each product of fermentation was formed by the action of particular fungi or organisms developed successively during the decay of the albuminous substance. He described putrefaction as a peculiar species of fermentation produced and maintained by an animal ferment of the genus 'vibrio.'

During putrefaction, the substance, if exposed to the air, always experienced slow oxidation. This slow oxidation was entirely due to the presence of the lower cryptogamic and infusorial organisms. The sporules of these lower organisms Pasteur considered were ever present in the atmosphere. These views are mainly confirmed by subsequent observers. Schroeder, Tyndall, Sanderson, and others have shown that organic liquids capable of undergoing putrefaction may be preserved unchanged for a long time if they are first heated under pressure some degrees above 212° Fahr., and if proper precautions are used for the subsequent exclusion of all organic germs. When such precautions are removed the liquids rapidly become putrescent. Dr B. Sanderson has further shown that water is the source from which such living particles are mostly derived. No change took place in white of egg placed for several weeks in hermetically-sealed tubes, either at the ordinary temperature or when superheated; soon after the addition of water, however, to the albumen, living organisms were developed. Dr Douglas Cunningham's researches were confirmatory of these views. He showed by some experiments conducted in India, that although bacteria were found in the damp air of sewers, none were observable in dry air. The writer also alluded to his own experiments, in which white of egg was preserved unchanged in a test-tube for some weeks during last summer, although only covered loosely with a card. When, however, water was added to the albumen, putrefaction rapidly set in. These experiments showed that the water and not the air was the main source from which such organisms were derived.

The investigations of Cohn and others as to the natural history of bacteria were next briefly passed in review. Ehrenberg, Dujardin, Davaine, and others considered bacteria to belong to the animal kingdom. Professor Cohn, in his researches on the subject, has, however, distinctly proved the close relations these minute organisms bear to the oscillatoriaceæ.* He traced their origin from the scum found on the surface of putrescent organic liquids, called 'zooglœa,' and he placed them in the vegetable kingdom in the family Phycochromaceæ, in a natural order Schizosporeæ. They are divided into four tribes as follows:—

I. Sphærobacteria.
    Genus 1. Micrococci charact. emend.
II. Microbacteria.
    Genus 2. Bacterium charact. emend.
III. Desmobacteria.
    Genus 3. Bacillus novum genus.

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* Beträge zur Biologie der Pflanzen, Breslau, 1872.

IV. Spirobacteria.
Genus 4. Spirillum Ehr.
Genus 5. Spirochæta Ehr.

The micrococci are the most minute of all forms of bacteria. They consist of minute spherical or oval bodies, motionless, sometimes in chains, sometimes in colonies. Cohn divides them into the chromogen (pigmentary), the zymogen (fermentable), and the pathogen (contagious). Rivolta gives several instances of miracles performed by the chromogen,* of bread turned into blood by the presence of the monas prodigiosum, a micrococcus of Cohn. The zymogen are frequently found with the bacterium termo in putrescent liquids, although not the proper ferment of putrefaction. Lastly, we have as the pathogen, the m. septicus (microsporon septicum, Klebs), found in the miliary eruption of typhus, pyæmia, and other diseases; the m. vaccinæ, found by Chauveau and Sanderson in vaccine lymph; and the m. diphthericus, the same probably that caused Eberth † to say 'the metastatic pyæmia is for the most part a diphtheria with numerous localisations.' The bacteria proper are, as the name implies, stiff rod-like bodies about 1·12000" to 1·5000" in length in the different species; they are hyaline or slightly granular in appearance, and exhibit occasionally transverse markings when dry. Cohn divides the whole series into two species, the b. termo, dumb-bell-shaped, possessed of slight to-and-fro movements, essentially the ferment of putrefaction; the b. lineola, a small rod-like body somewhat larger than the preceding, and endowed with stronger locomotive powers, the ferment especially of sour milk. In the bacillus the thread is longer than in the preceding order. One species only possesses interest to the pathologist, and that is the b. anthracis (bacterium carbunculare).‡ These hyaline, rod-like bodies are found in the blood of men and animals afflicted with the disease. They are occasionally found in chains. In the vibrios the filament is flexible and the motion rotatory. The v. rugula was found by Leeuwenhoek in the evacuations of cholera and diarrhœa. In the spirobacteria the thread is coiled spirally, these organisms do not possess any special interest to medical men.

Dr Hollis next drew attention to the recent experiments of Professor Sanderson as throwing light upon the etiology of infectious diseases. Sanderson produced, by the introduction of irritant substances in the skin or peritoneum, two distinct sets of consequences—a chronic disease resembling tuberculosis in its anatomical characters, and an acute disease presenting the leading features of pyæmia. There were grounds for supposing the morbific material of contagious diseases to be particles of extreme minuteness suspended in the infective liquid, and that the particles belonged to the family bacteria just considered. In all infective inflammations in the lower animals, these organisms abounded in the exudation liquids, and when the symptoms were acute, in the blood also. Two types of organisms were present, according as the changes were acute or chronic—minute rod-shaped actively moving bodies in the former, dumb-bell-shaped organisms and chains of such in the second case. It appeared that the intensity of the infecting agent varied according to the number and character of the organisms found in the infected liquids; and that septicæmia might be induced both by the existence of putrescent albuminous matter in the blood, and also by the introduction into the circulation, or into the serous cavities, of small quantities of liquids derived directly from the living tissues in certain states of inflammation.

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* Del parasitti vegetali, Turin, 1873.

† Zur Kenntniss der Bacteritischen Mykosen, Leipsig, 1872, p. 15.

‡ Delafond and Rivolta.

As regards the relations which exist between these organisms and fevers of the zymotic type, no very definite observations had been made. Hallier had found micrococci in the blood of patients suffering from scarlet fever, and in the evacuations of cholera, diarrhœa, and other diseases; but Sanderson has thrown some doubt on the accuracy of these observations, while Dr Cunningham positively asserts that no connection appears to exist between the number of bacteria spores and mycelia in the air and outbreaks of epidemic diseases in an Indian jail. The writer then noticed the mechanical theory of fever promulgated by Drs Hüter and Greveler. When putrid pus full of monads was injected into the web of a frog's foot, many capillaries were occluded by the blocking up of their orifices by monads and leucocytes. Hüter considers the white corpuscles take up the monads, and that their increased adhesiveness is due to this cause. The loss of heat is diminished by any such obstruction to the circulation in the two great cooling surfaces of the body, the skin and the lungs, and fever results. Sanderson noticed bacteria in the bodies of leucocytes. We thus obtain an explanation of the increased viscidity of the liquids of acute inflammatory fever, and of the presence of the fever itself. Finally, the writer noticed the various views of physiologists as to the origin of the bacteria. According to Hoffman, Sanderson, and Rindfleisch, they directly breed themselves, and are developed *in media* by direct introduction in a germinal or adult condition. Huxley, Hallier, Lüders, and Lister consider they are derived from other dissimilar bodies, of a fungoid nature. Cohn may be classed with these. A few maintain their origin from spontaneous generation. Grimm of St Petersburg and Bastian of London are typical champions of this view, which has been finally (he hopes) exploded by the carefully directed experiments of Drs Sanderson and Roberts (of Manchester).

[Since the above paper was read Professor Billroth of Berlin has published his elaborate work on the subject.* He considers coccobacteria septica to be vegetable forms found in the blood of men and animals suffering from various diseases, and that they are a combination of the granular coccus (micrococcus of Hallier and Cohn), rod-shaped (bacterium) and flagon-like (ascococcus) forms. This plant in the course of its growth has sometimes round, sometimes rod-shaped joints (named respectively streptococci and streptobacteria), and although it retains its original form for the most part, either may be developed into the other. In a similar manner, either in the course of their growth may produce a slimy mass (Cohn's glia), which may take the form of a platter (petalococcus), or become flask-shaped (ascococcus). The above definitions have the advantage of simplicity, whatever their pathological value may be.]

February 19.

Mr Furner showed a heart with the left duct of Cuvier persisting, and Mr Stowers a microscopic specimen of the parasite in tinea tonsurans.

Mr Symons showed a microscopic specimen of the right ventricle of the heart, from a patient who had died while under chloroform, showing fatty degeneration of the muscular fibres.

Mr Cumberbatch read a paper on 'Chloroform.'

He first explained the manner in which the vapour of chloroform produced insensibility, by changing the blood; and secondarily, affecting the nervous centres. After describing the sensations of the patient produced by its influence, and noticing its general effect upon the respiration and pulse of the individual, the speaker said that struggling proportionate to the muscularity of the patient generally ensued. The signs of unconsciousness sufficient to justify the performance of a surgical operation are briefly, *muscular flaccidity and conjunctival insensibility*, though the latter test is not always to be relied upon in hysterical people. Urgent stress was laid upon the necessity of careful watchfulness over the respiration as well as the pulse during the administration of the anæsthetic. The speaker did not think that chloroform is contraindicated under any circumstances where it is justifiable that the patient should undergo a surgical operation, neither cardiac nor pulmonary affections prohibiting its employment if care be used. Special care is necessary when there is reason to suspect that the patient's heart is *fatty*. As to age, Mr Cumberbatch had given it to a child three days old and to a patient over seventy years of age. Clover's apparatus is the best, but requires constant looking to. If no apparatus be used, a piece of lint folded square is useful, upon which the chloroform is poured from a drop glass or bottle. Supposing the patient struggles much, the administration must be stopped for a time if the breathing be slow and laboured. Always *listen* to the breathing, as well as watch it, as the parietes of the chest may be in action though little or no air enter the lungs. The ruddiness of the lips is a good sign, for while the lips are red the heart cannot be failing. The manner in which the tongue may impede respiration was then described, and some hints for treatment given. After describing the signs of faintness and the precursors of vomiting, reference was made to the persistent vomiting which sometimes occurs. Death may result from—

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* Untersuch. über d. Vegetationsformen von Coccobacteria Septica, Berlin, 1874.

1. Cardiac syncope.
2. Asphyxia.
3. Reflex irritation.
4. Paralysis from over-distention.

After quoting Dr Black's views upon the cause of death, the speaker concluded by narrating illustrative cases of death from chloroform.

February 26.

Mr Cretin read cases—one of femoral hernia, and others illustrating the action of alcohol in pyæmia.

March 11.

Mr Doran read a paper on the 'Surgery and Diseases of the Foot.'

In this paper the author, after speaking generally of some of the more common diseases of the foot, referred especially to the relative liability to disease of the various tarsal bones. He had examined the diseased tarsi at the College of Surgeons, at King's College, and St Thomas's Hospital Museum, and found that the common course of caries was to begin on the outer side of the foot—from the calcaneum to the cuboid and outer cuneiform bone; and that when the astragalus, os calcis, and scaphoid are first attacked, the disease generally begins in the synovial membrane. Mr Doran next gave a short and succinct account of the perforating ulcer of the foot, and quoted Mr Hancock's opinion that Chopart's or Syme's amputation is the only effectual remedy.

On the question of the comparative merits of amputation and excision of the ankle-joint, Mr Doran remarked that the 'statistics of excision will be unsatisfactory unless they can clearly show that the majority of cases result in a foot capable of supporting the body better than a Syme or a Chopart's stump can; with as little tendency to bone or joint disease.' After a description of the various amputations practised in the foot, Mr Doran clearly established, by references to both authors, that Hey's and Lisfranc's operations are quite distinct; the former being an amputation through the bases of the metatarsal bones, while the latter consists in the disarticulation of the entire metatarsus.

NOTES

UPON SOME

FORMS OF HEPATIC ENLARGEMENT.

BY

DYCE DUCKWORTH, M.D.

Read before the Abernethian Society, January 15, 1874.

In this paper I propose to discuss very briefly some points respecting certain enlargements of the liver which appear to me worthy of attention.

The remarks I have to make have reference to the following hepatic diseases: hypertrophic cirrhosis; lardaceous infiltration; syphilitic affections; enlargement with chronic jaundice; so-called 'peculiar' enlargement with chronic jaundice and xanthelasma; and lastly, enlargements due to influences of residence in tropical climates.

It is certainly a curious fact that cirrhosis of the liver with enlargement should have so long escaped the attention of pathologists and of physicians. The older, and indeed the most recent writers are wont to describe a primary stage of the disease in which the liver is larger than normal. Saunders, Bright, Budd, and others in this country, have done so. Saunders, writing in 1792, expressed his belief that the size of the organ varied according to the period and duration of the complaint.*

Unquestionably there is clinical evidence for this opinion, for cases exemplifying the sequence just mentioned are constantly under observation, especially in hospital practice.

It would perhaps not be wrong to describe the stage of enlargement, and that of subsequent diminution of the organ, as being typical phenomena in cirrhosis of the liver.

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* Treatise upon the Liver, &c. London, 1793. P. 196.

Cases of indurative hepatitis which are not followed by contraction of the organ are met with occasionally, but with what frequency I am unable to state. It may be urged, as Dr Gee has remarked in his commentary on two cases of this affection,* that livers found enlarged by excess of fibroid material amongst and around the lobules, may have only been in the early condition of cirrhosis, and that they would in time have shrunken and lost weight. But against this view it must be noted that the patients die after sustaining most of the miseries entailed by the commoner form of cirrhosis; and further, it seems highly unlikely, as Dr Gee observes, that livers doubled in weight should contract to such an extent as to justify their being termed cirrhotic in the ordinary sense of the word. Again, the cause of hypertrophous cirrhosis is, at all events, in some cases the same as that which induces the ordinary form of the affection, to wit, alcoholic intemperance.

Rokitanski makes a passing allusion to the possibility of enlargement of granular livers when the fibroid matter preponderates over the glandular structure.†

M. Ollivier, who has studied the subject of cirrhotic enlargement of the liver, has formed the opinion that it is a definite affection,‡ and not the first stage of an incomplete cirrhosis. The proliferation of connective tissue is continuous, and the atrophy of the lobules follows as in ordinary cirrhosis. The new formation is not, however, checked, and does not proceed to contract. M. Ollivier believes that the blood is early changed in this affection, and that hæmorrhages and jaundice occur more frequently in hypertrophic cirrhosis than in the ordinary form of the disease. He attributes it to alcoholic excess.

Dr Habershon, in the Lettsomian Lectures for 1872,§ describes a condition called inflammatory induration in which the glandular tissue is especially involved, the liver becoming much enlarged, often permanently so, its tissue being indurated. This form of disease is, he alleges, with difficulty distinguished from early cirrhosis. He mentions as clinical facts that there are greater sallowness of complexion and even jaundice in these cases. Dr Habershon has informed me that he believes there is in such instances 'effusion in the course of Glisson's capsule, less contractive perhaps than in ordinary cirrhosis;' but in addition he thinks 'there is what may be more strictly regarded as hypertrophy of the glandular cells. Sometimes the cells are wasted, shrunken, and atrophic; and sometimes full, large, and distinct; and the latter state is associated with enlargement and fulness of vessels.' He also thinks this condition is less persistent than the strictly inflammatory change.

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* St Bartholomew's Hospital Reports, vol. v. p. 112.

† Syd. Soc. Transl., p. 144.

‡ L'Union Medicale. September 1871. Paris. Pp. 361, 400, 449.

§ P. 56.

It is probable that several conditions may ultimately be recognised by pathologists as underlying the clinical form of cirrhotic enlargement.

Virchow* has described a simple enlargement of existing elements—a hypertrophy—in the liver, by means of which the organ becomes larger; and he also avers that a liver may become enlarged by a very abundant development of a series of small cells in the place of the ordinary ones, constituting hyperplasia or numerical hypertrophy.

Dr Legg has adduced good reasons for the belief that the liver-cells themselves take part in the formation of the increased connective tissue in cases of cirrhosis. In a paper on cirrhosis in the eighth volume of St Bartholomew's Hospital Reports, 1872, he quotes the examination of a case of hypertrophous cirrhosis in which there was marked multiplication of both liver-cells and nuclei, these elements being smaller than normal, rounded or oval. In other cases of more advanced cirrhosis he found the appearance of multiplication of cells and nuclei less obvious; but the cells were greatly altered in form, many of them becoming filamentous, oblong, and spindle-shaped. He believed they were undergoing change into connective tissue, and he thinks this view is confirmed by observations made in certain cases of wounds of the liver.

Dr Budd† has recorded a remarkable case of cirrhotic enlargement in which saccharine diabetes occurred.

Trousseau‡ mentions having met with two cases of hypertrophous cirrhosis of liver and spleen in Graves' disease. In such instances this condition is probably reached by reason of repeated congestions of these organs.

It has been thought that hypertrophous cirrhosis is more commonly met with in the case of those who have drunk beer to excess, while spirit-drinkers are liable to the atrophous form; the increased bulk of the organ in the former case being due to increase of fat.

Cases in which marked excess of fat occurs, or in which there is lardaceous infiltration, must however be excluded from the category of true hypertrophous cirrhosis.

The enlargement in this form may be irregular, and portions only of the liver be increased in size. Thus the left lobe may be proportionally larger than the right.

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* Cellr. Pathology (Transl.), p. 65.

† Dis. of Liver, p. 46.

‡ Clin. Med. (Transl.), vol. i. p. 573.

There is one symptom which I think is noteworthy in these cases. The breath has a peculiar odour which is not easy to describe. It is, or was formerly, called at Guy's Hospital 'hepatic breath.' It is unpleasant and mawkish. I have not, so far as I can remember, observed this in cases of contracted liver, and it is certainly more frequent in instances of enlargement due to obstruction of the common bile-duct.* Dr Habershon confirms my opinion as to this.

As to cirrhosis generally, I wish to affirm that it is a disease but rarely met with amongst the upper classes in society. The experience of hospital physicians who have also large private practice, leaves no doubt as to the truth of this statement, inasmuch as it is drawn from all classes of society, and I am permitted here to quote the opinions of Sir George Burrows and of Sir William Gull in confirmation of what I allege. The latter calls attention to the frequency of the disease in licensed victuallers, provided they reach the age of 55–60, which is, for them, old age. The habit of taking spirits and alcoholic liquors at irregular times, in immoderate quantities, and often without other food at the same time, engenders the disease with such marked frequency amongst the lower orders.

It is not unlikely that some of the instances of cirrhosis in children are really due to advanced stages of syphilitic disease. Rindfleisch suggests this view, and thinks it is somewhat supported by the perfection of the arrangements secured for the regulation of the portal circulation, and which seems to him only explicable on the supposition of the liver having had to accommodate itself to the disorder while still in the process of development.

As a rule, the progress of cirrhosis is accompanied with a more or less painful condition of the liver, especially in the earlier stages.

LARDACEOUS ENLARGEMENT OF THE LIVER.

Under this head I desire mainly to call attention to one fact. I refer to the change in size which livers enlarged by lardaceous infiltration may undergo.

This was first brought under my observation in a case which was long under the care of Dr Andrew, and for some time also under my own care. The disease occurred in a soldier, and appeared to supervene as part of a syphilitic cachexia.

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* I have noticed it, however, in a case of chronic jaundice due to obstruction of the common bile-duct.

The man was about 35 years of age, and came first under Mr Savory's care for disease of the lower maxillary bone. This led to prolonged suppuration, but hardly to sufficient 'depurative' loss to induce of itself lardaceous infiltration. The liver and spleen became greatly enlarged, presenting the typical characters of the disease. The liver indeed at one time reached to the right iliac fossa, and nearly to the pubes. There were also slight, but intermitting, albuminuria, œdema of legs, and chronic and intractable diarrhœa. Nodes appeared upon the pericranium. The man was nearly two years under observation. Portions of the lower jawbone came away. Gradually for 15 months the liver was observed to shrink, and the organ became ultimately about half the size it once was. The patient appeared to improve during this period, and he gained flesh. At the autopsy the liver weighed 117 ounces, and was both lardaceous and fatty. The spleen weighed 12½ ounces, contained old 'sago bodies,' and was softer than ordinary lardaceous spleens: its capsule was also thickened. The kidneys weighed 19¾ ounces together, and were lardaceous and fatty. The intestines were also infiltrated throughout.

Since observing this case, several other instances have come under my notice, so that it cannot be doubted that livers enlarged by lardaceous infiltration may sometimes undergo marked diminution in size. The process of shrinking would appear to be very slow, and hence we may not expect to witness this change unless the case be very protracted, and the patient survive for a long time.

There may possibly be a vital difference in the infiltrating material in different cases of lardaceous disease, and it is worthy of note that in the case I have quoted above the affection ensued upon syphilitic dyscrasia. It is also to be observed that the infiltrating amyloid material itself is differently affected in different cases by various reagents. Thus the steel or indigo-blue colour is not always to be obtained with iodine and sulphuric acid.

As I shall show presently, under the head of hepatic enlargements due to syphilitic growths, the changes accompanying recovery in the organ are remarkably slow, and the reduction in size is only attained after a long period.

Niemeyer demanded proof of the alleged shrinking in size of livers enlarged by lardaceous infiltration, and was apparently incredulous as to the occurrence of such an event; but I think there is certainly clinical evidence for it, and not only so, but it would appear that amyloid disease may occur in organs, and in due time disappear so far, at all events, as to leave no signs recognisable at the bedside. I may quote the opinion of Dr Andrew for the latter statement.

It remains for further clinical observation to determine how far waxy disease may disappear after carious bones and other sources of suppuration are removed.

Frerichs states that recently infiltrated lardaceous matter may, under certain circumstances, be absorbed, but he thinks that recovery does not always follow upon the removal of the hepatic enlargement.

Budd also remarks that he has known instances in which livers, which he supposed to have undergone lardaceous change, diminished very much under the prolonged use of muriate of ammonia.

Amyloid infiltration sometimes forms part of the enlargement of the liver and spleen met with in the bodies of those who have suffered from malarial fevers in the tropics. Again, this affection may coexist with syphilitic gummata, with interstitial hypertrophy, and with fatty changes in the secreting cells.

Lastly, under this head, I would direct attention to the tendency to phlebitis and thrombosis in cases of lardaceous disease. Hence it is necessary to be cautious in treating the severe dropsical symptoms by such measures as acupuncturation.

ENLARGEMENT OF THE LIVER WITH CHRONIC JAUNDICE.

Amongst the less common forms of hepatic enlargement met with, are those due to obstructed bile-ducts.

The lesions consecutive to this have been carefully studied and recorded by Dr Legg,* who has made direct experiments upon animals to learn the results. The essential changes consist, as he has shown, in a marked increase of the connective tissue of the liver which spreads from the fibrous coat of the gall-ducts, together with atrophy and fatty infiltration of the cells of the acini. The glycogenic function of the organ also appears to cease, and hence rapid wasting of the body follows. Clinically, this form of disease is to be suspected when, after symptoms of biliary colic and icterus, the liver is found enlarged in all its dimensions. A calculus may be impacted in the common duct. Pain, more or less localised, not however constant, is present. The jaundice persists and becomes more complete and intense, even olive-green. Treatment is unavailing. The liver continues to enlarge, the surface and edges of the organ are smooth and indurated. Nutrition fails, and universal wasting occurs. There is no pyrexia.* Severe symptoms for the most part are absent, unless ulceration of the duct is set up, and the calculus gives signs of entering the peritoneal cavity or a neighbouring hollow viscus. The signs of wasting may, however, be absent for some months, as Budd has shown. Patients may linger on for a long period with completely obstructed gall-duct.

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* St Bartholomew's Hospital Reports, vol. ix.

'PECULIAR' ENLARGEMENT OF THE LIVER IN CONNECTION WITH CHRONIC JAUNDICE AND WITH XANTHELASMA OF THE SKIN AND OTHER TISSUES.

In 1851 Drs Addison and Gull described in the Guy's Hospital Reports † the affection of skin now known as xanthelasma in connection with enlargement of the liver. Since that period a considerable number of cases have been recorded, but no post-mortem examinations of these were secured until Dr Murchison obtained one in a well-marked instance. Deep and enduring jaundice has been noticed to precede the skin-disorder in almost all the recorded cases. But sometimes it has occurred in connection with 'ovarian disorder,' tendency to migraine, and it is also believed to have been seen in two cases of saccharine diabetes.

The characters of the 'peculiar' hepatic enlargement are described as 'uniform, firm, and smooth, with tenderness.'

It is alleged further, that although the jaundice is deep and persistent, yet bile appears in the stools, so that there does not seem to be complete obstruction of the common duct. In Dr Murchison's case, that of a man, æt. 48, who had been very intemperate, jaundice appeared after several years of dyspepsia and vomiting. Xanthelasma occurred. The liver was much enlarged and tender, urine very bilious and occasionally albuminous, motions bile-stained.

At the autopsy the liver weighed over 80 ounces, and was found to be infiltrated everywhere with fibroid growth along the portal

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* Some writers aver that there is no fever observable in attacks of biliary colic, and this point is indeed even mentioned as a diagnostic sign of the affection. Trousseau does not allude to the matter. Niemeyer and Murchison state that there is no fever. Budd* remarks that 'the passage of gall-stones does not produce, at first, . . . fever; . . . if, however, the stone be long in passing, some degree of fever is set up;' but he attributes the pyrexia to inflammation of the ducts. I have, however, witnessed several cases of biliary colic in which the temperature has been pyrexial during the paroxysm; and in the last case of this kind which I saw, the temperature rose to 103° Fahr. and nearly to 104° Fahr., and remained high for several days. There has not been any clear evidence in these cases of inflammatory mischief in the ducts.

† *Vide* 2 Ser., vol. vii. p. 265.

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* Dis. of Liver, p. 376.

canals and between the lobules. There were, indeed, most of the appearances theoretically supposed to exist in the early or enlarged stage of cirrhosis. The proper parenchyma was mapped out into jaundiced islets.

The glands in the fissure of the liver, along the spine and iliac arteries, were much enlarged. The spleen was much enlarged (23 ounces), and both it and the kidneys had emboli in their interior. There were vegetations on the ventricular surfaces of the aortic valves, two of which had grown together.

Three cases of this disorder of the skin have come under my notice in connection with chronic jaundice in this Hospital, one in a woman, two in men. A post-mortem examination of one of these was made about a month ago. The jaundice was complete, and the source of it and of all the troubles was hydatid disease of the liver and other parts. One cyst had obstructed the common duct. Another of the cases is under my care at the present time in Mark Ward. The jaundice is complete in this instance, and has been so for more than three years. The liver and spleen are both greatly enlarged. Xanthelasma has occurred on the eyelids, and in scattered masses upon the forehead and chin. The diagnosis in this case is somewhat difficult. All the symptoms may be explained by impacted gall-stone in the common ducts; or there may be a hydatid tumour or tumours deeply seated in the liver; or, again, there may be fibroid infiltration, as in Dr Murchison's case.

For the present, however, it may suffice to remark that the existence of any peculiar form of hepatic enlargement in connection with xanthelasma is not by any means proven, and it is right to accept the recorded facts which show that this skin-disorder may exist not only in conjunction with chronic jaundice arising from different sources, but that it may be present even where there is no manifest hepatic derangement. There is, however, strong evidence in favour of the view, that continued presence of bile in the blood is a decided predisposing cause of xanthelasma in the skin, and on various mucous surfaces.

It is noteworthy that certain cases have occurred in which the hepatic enlargement has subsided, and the patient recovered, the xanthelasma persisting. The latter, indeed, either remains or continues to grow. It has not been observed to disappear.

Murchison's statement that in all these cases 'sufficient' bile continues to reach the duodenum, cannot be said to hold good.

I have knowledge of four cases of xanthelasma palpebrarum at the present time—two in women past middle life, and two in men aged 56 and 75—in which there have been and are no hepatic troubles.

HEPATIC ENLARGEMENTS DUE TO SYPHILIS.

It is now known that several forms of disease are set up in the liver as the result of syphilitic poison. In most cases several or all of these forms coexist. Thus, gummata are generally associated with fibroid (interstitial) change; the latter is aggravated by perihepatitis induced by the irritation of superficial gummata, and in addition lardaceous infiltration not uncommonly supervenes.

Syphilitic disease of the liver is not always readily recognisable, and this is especially the case in early stages. One result of the frequently-occurring perihepatitis is to lead to adhesions between the liver and the abdominal wall, and thus the mobility of the organ is much impaired. Hence there is only partial or no descent of the liver upon full inspiration. The surface of the organ is often deeply furrowed and mapped out into large islets.

These are to be distinguished both from nodules of carcinoma and from the smaller lobules of alcoholic cirrhosis, which, again, are not unfrequently simulated by granular fat in the abdominal walls.

There is a considerable amount of pain in syphilitic enlargements of the liver. The tenderness is increased by pressure.

Ascites may or may not occur, but is more generally absent, and jaundice is likewise infrequent. The superficial abdominal veins generally enlarge to some extent. Wasting and cachexia coexist. The glycogenic function of the liver is doubtless gravely affected. The spleen is usually hypertrophic. The urine is albuminous or not, according to the presence or absence of lardaceous change in the kidneys.

If there be concomitant interstitial nephritis, or renal gummata, or if mechanical pressure exists, there will be albuminuria.

The adjacent lymphatic glands are not enlarged in this disease. The complexion of patients suffering from hepatic syphilis is usually earthy and sallow, often very dark.

In the early phases of the disease there may be, according to Wunderlich, evening exacerbations of fever with alternations of morning remissions.

The diagnosis is assisted in some, but by no means in all, cases of syphilis, by a consideration of the concomitants of the malady.

In the inherited form it is found that the disease may be manifested at certain definite periods—*e.g.*, second dentition, or at the time of puberty, or even much later. It is rare during infancy. It is a matter of dispute whether there be really latent periods in the cachexia of syphilis, so that at certain evolutionary epochs the disorder may break out; or whether these develop-mental periods are merely the occasions on which relapses are very prone to occur.

The affections liable to be confounded with syphilitic enlargement of the liver are cancer, cirrhosis, and perhaps deeply-seated hydatid tumours.

I wish to call attention very specially to the fact that in many cases of this malady, if there be doubt as to the diagnosis, and antisyphilitic treatment be nevertheless adopted, but little light will be shed upon the nature of the case for a long period. In other words, the results of treatment are tardily manifested. A month's medication will sometimes produce little appreciable change for the better. Three months' treatment will, however, give more encouraging prospects. Hence much patience is called for. The iodides of potassium and iron are the best salts to give, and the doses of the former need not be larger than 3 or 5 grains, with a drachm of the syrup of the latter thrice a day. Cod-liver oil is also useful. Mercurial inunction I have not found of any value. I have on several occasions tried the red iodide ointment. If the iodide of potassium is badly borne after a time, the nitro-hydrochloric acid may be given for a few weeks. But the iodides should be recommenced and persevered with. The waters and baths of Aix-la-Chapelle are esteemed highly in cases of visceral, as of cutaneous, syphilis. A long prognosis as to time must be given. Too often, however, a fatal issue is reached in spite of all medication. The moral therefore is, that the primary and secondary manifestations of this dire scourge should be promptly met as they occur.

HEPATIC ENLARGEMENTS DUE TO INFLUENCES OF TROPICAL CLIMATES.

This topic is naturally a comprehensive one, and I must claim for it a position of high importance in relation to the interests of a large number of our countrymen who on various accounts pass portions of their lives in the tropics.

Nothing is commoner than to hear people who have lived even a short time in warm and malarious countries complain of their liver. And in practice it is found that these complaints are fairly justified. I apprehend that British experience on this subject is at once the best and most extensive that exists.

The work done at home at Netley, and in the various medical schools of our Indian Presidencies, supply most reliable data for correct appreciation of the mischief wrought by tropical residence, and by all that it entails.

I think the forms of enlargement of the liver due to tropical influences may be classified as follows:—

Simple Enlargement.—This may be due primarily to the effect of high temperature.* It is not sufficiently insisted upon that hepatic disturbance is very apt to occur from this cause alone. But examples are not wanting, even in Europe, of the ill-effects of prolonged solar heat, independently of any malarious influence. Hepatic pain and tenderness and bilious diarrhœa are some of the early results of simple solar exposure. The lesion here is no doubt little more than congestion leading to undue fulness. Persistence in exposure, and especially if conjoined with improper diet and abuse of strong drinks, confirms this condition, and the congestion becomes chronic. Unless a cooler climate be sought, and the unwholesome habits be altered, graver changes ensue. A return to Europe in such cases is followed by a return of health in a few weeks, almost without any aid from medicine.

Simple enlargement is very common amongst young Europeans on first commencing residence in the tropics. Change of climate is essential to recovery in most instances, but it may often be secured at hill-stations or by a short sea-voyage without a return to Europe.

More commonly malarious influence is combined with high temperature. This means that fevers occur in the course of which hepatic congestion is a severe symptom. And such fevers are very apt to recur with slight provocations. The spleen suffers similarly. The hyperæmic enlargements thus recurring are prone to remain to some extent after the fever subsides, especially if a non-malarious district is not sought.†

It would be pure speculation to state what are the exact conditions of the liver and spleen in such cases, for death is not very common. But the congestion may pass on to inflammation—hepatitis—and an abscess be the result. The hepatitis may, however, resolve without the formation of abscess.

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* Murchison, however, is doubtful of this. It is certain, however, that in the course of fevers and of high pyrexia, the liver resents more than other organs, except perhaps the brain, the influence of high temperatures. *Vide* Legg, in Path. Soc. Trans., vol. xxiv. p. 270.

† It is believed that malarious poison is long retained in the portal circulation, and is eliminated with difficulty. Dr Brunton* has lately called attention to the fact that certain poisons may long be pent up in the portal circulation, and are best removed by purgatives. The not infrequent association of dysentery with malarial influence may thus sometimes, or in part, be due to an eliminative effort. In certain countries (*e.g.*, Morocco) where quinine cannot be procured, purgatives form the empirical method of treatment for ague.

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* Practitioner, May and June 1874.

Of hepatic abscess as a tropical lesion and cause of enlargement, I do not propose to allude further in this communication. Let me give you the experience of Sir Ranald Martin upon this topic. He has informed me that 'the nature of a very large majority of the enlarged livers amongst returned Indians of the better classes has been that of simple enlargement, or of passive congestion. They are most generally the result of remittent or intermittent malarious fevers, and I believe their pathological condition consists in passive congestion of both portal and hepatic veins.' It is not likely that this state of congestion can be maintained for any length of time without sequential parenchymatous changes. But we are in ignorance as to the nature of these, if they exist. At all events, they constitute recoverable conditions within certain limits.

The experiences of Netley, kindly put before me by Professor Aitken, are much to the same purport as Sir Ranald Martin's, but the former mentions, in addition to vascular turgescence, fatty accumulations and pigmentary changes.

Under the next head I believe may be described *complex enlargement* due to tropical residence. The simple enlargement may be complicated with lardaceous infiltration, or with cirrhosis, or even with both of these changes. Professor Aitken alludes to anæmic conditions of liver and spleen and amyloid change. There seems to be sufficient evidence of the supervention of lardaceous change in cases that have long suffered from such exhausting discharges as occur in chronic diarrhœa and dysentery. This is as might be anticipated. Chronic malarial influence seems also to favour lardaceous change.

Cirrhosis is sufficiently common amongst private soldiers who have served in the tropics, and this is due to their alcoholic intemperance.

Again, syphilitic conditions are common to the tropical as to the non-tropical resident.

Cirrhotic change is to be suspected in such cases of apparent simple enlargement as do not readily improve after return to European climate.

THE

ABERNETHIAN SOCIETY

ST BARTHOLOMEW'S HOSPITAL.

REPORT OF PROCEEDINGS.

SESSION 1874-75.

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E ABERNETHIAN SOCIETY having determined in Special Meet-
hat it was advisable to publish a Report of its Proceedings,
inted a Committee to carry the project into effect. The Com-
e therefore drew up the following Rules, which were accepted
e Society at the General Meeting:—

. With the approval of the Editors (of the Hospital Reports), that the Proceedings of the Society should be published in the Hospital Reports as heretofore, but in more detailed form, and that afterwards reprints should be thrown off for distribution among its Members.

. That the papers for publication be selected by a Committee consisting of the two Presidents, two Vice-Presidents, two Hon. Secretaries, and the Hon. Treasurer.

. That the reprints shall be stitched in the form of a pamphlet, and shall contain a complete List of the Members of the Society for the last five years, and a table of contents shall also be provided, with a printed cover.

. That copies be distributed, free of charge, to Members who are not of more than five years' standing, and that those of more than five years' standing may obtain copies on payment of one shilling each.

. That these Rules be also printed in each copy of the Proceedings for the information of Members.

SESSION 1874-75.

OFFICERS.

residents—Dr MOORE and Dr TAYLOR.

-Presidents—Mr KEETLEY and Mr DORAN.

Honorary Treasurer—Mr SAVORY.

ry Secretaries—Mr MACREADY and Mr REID.

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ntlemen who have become Members of the Society during the past Five Years.

-71.

. M.
K.
. B.
. E. W. B.
, H. E.
J.
B.
. C. G.
. H.
, S. D.
J.
G. B.
D.
e H.
W.

Harris, J. D.
Holden, L.
Mills, J.
Quesne, E. le.
Smith, G. T.
Smith, W. R.
Stowers, J. H.
Sturmer, A. J.
Whitsed, J. L.

1871-72.

Barker, W. H.
Benton, S.
Boodle, R. M.
Butlin, H. J.
Champneys, E.
Groves, J. W.
Hatfield, W. H.
Heard, C. G.
Hopcroft, T.
Horner, A. C.
Leftwich, R. W.
Milner, E.
Parnell, G. C.
Pieri, C. E.
Poignaud, M.
Ranking, J.
Reid, J. W.
Sawtell, T. H.
Scott, J.
Strugnell, W. F.
Tootell, E.
Vernon, M. H.
Whitmore, W. F.
Whishaw, J.

1872-73.

Alderton, F. G.
Andrews, S.
Baillie, R. H.
Brumell.
Cobbold, G. W.
Cooper, A.
Crétin, E.
Day, C. H.
Dixon, T. A.
Dunn, H. B.
Evans, F. W.
Field, A. F. F.
Hales, R. T.

Hall, F. de H.
Harris, V. D.
Harrison, C. E.
Hastings, G.
J'Anson, W.
Livesay, E. W.
Macready, J.
Moore, C. A.
Ormerod, J. A.
Pooley, W. M.
Roeckel, W.
Rule, G. H.
Russell, J.
Sheehy, W. H. P.
Sloman, H.
Smith, G.
Steavenson, W. E.
Ward, A. G.
West, S. H.
Williams, A. G.
Williams, J. W.

1873-74.

Carcenac, E.
Edwards, A. E.
Farrington, D. W.
Ferrand, C.
Glyn, H. A.
Hames, G. H.
Hart, N.
Heath, W. L.
Hepburn, A.
Hindle, G. R.
Howat, G.
Hutton, E. R.
Jackman, G. F.
Keetley, C. R. B.
Little, H. S.
Lucas, H. O.
Malden, F.
Peacey, W.
Peevor, H.
Prosser.
Pye, W.
Ranking, G. S. A.
Robertson, F. F. A.
Schofield, R. H. A.
Shoolbred, W. A.
Smith, Gerald.
Spooner, F. H.
Thomas, J. R.
Watts, F.
Wharry, R. W.
Wilmot, J.

1874-75.

Abercrombie, J.
Adams, J.
Bamber, C. J.
Bateman, A. G.
Calcott, J. B.
Campbell, J. M.
Chapman, H. M.
Clarke, W. Bruce
Collingridge, W.
Cripps, E. C.
Dennys, G. W. P.
Dingley, A
Edmunds, R.
Edwards, F. S.
Eve, F. S.
Gabb, C. B.
Good, F. T.
Kidd, P.
Lyons, Isidor.
Paget, G. E.
Patterson, G. H.
Roughton, J. W.
Thurland, F. E.
Waylen, S. A.
Weiss, H. F.

PROCEEDINGS

OF

THE ABERNETHIAN SOCIETY,

FOR WINTER SESSION 1874–75.

October 8, 1874.

Dr Southey delivered the introductory address.

October 15.

Dr Moore showed two sets of specimens illustrating the results of atheroma—

1st Patient: woman, aged 32 years. Hope Ward. August 1874.

Heart, aorta, and œsophagus, and dorsal vertebræ.

Heart: mitral valve contracted so as to admit but one finger; edge of the valve greatly thickened; no great hypertrophy of the heart.

Aorta: highly atheromatous throughout. At a point a quarter of an inch below the orifice of the left sub-clavian artery there is a sacculate aneurism three inches long. It rested upon the third, fourth, and fifth dorsal vertebræ; and their bodies are considerably eroded. The aneurism opens into the œsophagus by an orifice as arge as a florin. A firm mass of fibrin protruded through this orifice into the œsophagus.

Death was due to hæmorrhage. The stomach contained a firm, dark cast of bloodclot, and there was much dark blood in the intestines. The skin was blanched, and the kidneys, liver, and spleen were remarkably bloodless.

2d Patient: man, aged 57 years. Luke Ward. October 1874.

Heart, aorta, kidney. Piece of small intestine with atheromatous ulcer.

Heart: all cavities greatly dilated, and with them the aur.-ventr. valvular orifices, but no growths on the valves, and no thickening of their edges.

Aorta: enormously dilated; highly atheromatous from origin to bifurcation. In parts calcareous plates laid bare.

Kidney: shows an old infarct.

Death was the result of the general condition. The right lung showed a large recent patch of pulmonary apoplexy at its base. There was also an infarct in the spleen.

In the first case, the condition of the mitral valve showed that there had been endocarditis, while in the second there was nothing to indicate endocarditis. From the general features he thought it probable that in each case atheromatous disease of the arterial wall was the primary disease. In the woman, the aortic wall gave way, an aneurism was formed, and death occurred before the heart was much affected. In the man, no aneurism bringing the case to an end, the diseased condition of the aorta had time to tell upon the heart, and led to the great dilatation, with hypertrophy, which the specimen shows.

The emboli which led to the infarctions found in lung, kidney, intestines, and spleen were probably small pieces of the exposed calcareous atheromatous patches in the aorta.

In the first case, blood was vomited at intervals for several days. Its bright colour, and the fact that in the intervals there was a cough with bloody sputa, made this an instance in which it was not easy to decide whether the hæmorrhage should be classed as hæmoptysis or as hæmatemesis.

I did not see the second patient during life, but I am informed that he had frequent and severe attacks of angina pectoris. The coronary arteries are not diseased. Such pains are common in cases of extensive aortic disease.

Dr Hall read a paper on 'The Therapeutic Action of Certain Drugs.'

Ipecacuan was first considered, and its therapeutics were divided into the following classes:—

(1.) As an emetic.
(2.) As a nauseant, relaxant, expectorant, and diaphoretic.
(3.) In dysentery and the dysenteric diarrhœa of children.
(4.) In assisting the action of purgatives.
(5.) In various kinds of sickness, especially that of pregnancy.
(6.) In hæmorrhages.
(7.) As a local application.

The first and second divisions were dismissed in a few words, as ipecacuan is universally employed for these purposes. In the treatment of the dysenteric diarrhœa of children, one or two grains of ipecacuan were ordered three times a day, and though sickness may at first be produced, tolerance is soon established. Notes on ten cases were read, all of which were cured except one doubtful case. Marked improvement was noted from two to four days after commencing the treatment, and usually a perfect cure within the week.

The effect of ipecacuan in assisting the action of other purgatives was ascribed to its power of increasing the secretion of mucus by the intestine.

Under the fifth head some of the most brilliant effects of ipecacuan are seen. Dr Ringer's recommendation of minim doses of vinum ipecacuanhæ every hour was tried, and found to answer admirably, especially in the sickness of pregnancy. Three cases were cited, the last being an exceedingly severe one. They all yielded to this plan of treatment. The hæmostatic action was next mentioned, and notes of two cases read in support of it—the second one being an alarming attack of hæmoptysis, probably from a bronchiectatic cavity. In both these instances a satisfactory result was achieved. The mode of exhibiting the drug was ten grains every ten minutes for three doses, vomiting not being a contra-indication.

The remarks on ipecacuan ended with an allusion to the use of the spray in cases of winter cough and bronchitic asthma.

Belladonna was the next drug considered, but only in the treatment of nocturnal incontinence of urine, whooping-cough, and excessive perspiration. As regards the first of these three diseases, belladonna was described as being the most efficacious of all remedies, rarely failing to effect a perfect cure, and cases were adduced to prove this. Trousseau's plan of treatment of whooping-cough by a minute dose of the sulphate of atropia, commencing with the $\frac{1}{200}$th of a grain given daily before breakfast, was then commented upon, but no decided opinion expressed as to its utility, the cases alluded to being still under treatment.

To check excessive sweating, the linimentum belladonnæ was advised to be painted over the affected part.

After mentioning the almost specific effect of guaiacum in cases of quinsy, if given within twenty-four hours from the commencement of the attack, the paper concluded with a reference to the use of equal parts of camphor and chloral as a local application in cases of neuralgia.

October 22.

Dr Gee read a paper on 'Difficulties in the Diagnosis of some Kinds of Pleurisy.'

The paper consisted of two parts: the first part treated of the diagnosis of pleurisy from phthisis; the second part referred to difficulties arising in the diagnosis of pleurisy which are caused by concurrent enteritis.

1. In the first part of the paper an exemplary case was narrated, and the following general propositions were laid down:—(1.) That pleurisy may simulate phthisis in all respects; (2.) That pleurisy may be accompanied by the highest degree of emaciation and hectic fever, even when there is no discharge of matter from the side, and indeed no reason to suspect the existence of an empyema; (3.) That cavernous breathing and pectoriloquy are no proof of a cavity within the chest; (4.) That some kinds of friction-sound are (as Thomas Addison pointed out*) indistinguishable from phthisical râles. These friction-râles (as they are called by Damoiseau) are described in the second book of the Hippocratic treatise on diseases; † (5.) That in a doubtful case it may be well to try to gain the means of diagnosis from microscopical examination of the sputa.

2. In the second part of the paper several cases were narrated to prove that catarrhal enteritis is a constant companion of many, if not of most, cases of local empyema; at least in children. And the local empyema often being hard to detect, such cases may be mistaken for typhoid fever or chronic enteritis (simple or tuberculous). The paper concluded with the following remarks:—'Some lessons which we may draw from these cases are the following:—Not to be too ready to assign all the physical signs we make out in a chest to the lung; but always to remember that the pleura is nearer to the surface of the chest than the lung is, and that pleural diseases are very common. That the quantity of fluid present in pleural effusion is always greater than the physical signs might lead us to expect. And beware of that sound which Hippocrates described, the sound of boiling vinegar (the friction-râle). In the last case I heard that sound, and called it a subcrepitant râle, when it was indeed a friction-sound. Beware of those friction-râles. They seem destined to lead to a multitude of mistakes. Laennec, for example, who knew but little about friction-sounds, must always have considered those doubtful friction-râles to be râles produced in the lung. I say it is impossible, from the characters of the sound itself, to make out whether it be

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* Works, p. 63, 1868.

† Cap. 61, edit. Littré.

a pleural or a pulmonary sound. But forewarned is forearmed. In a doubtful case, repeated examination and careful meditation over the signs and symptoms will mostly lead us right.

'Now if, with the best judgment we have, we come to the opinion that possibly there may be a small collection of pus, I think it is our duty to try to evacuate the pus. I can truly say that, for my own part, I never saw any harm from puncturing the chest, even when there has been no pus to evacuate. Usually there has been pus to evacuate: but I am not ashamed of a dry tapping. And when a small empyema is reached, and perhaps less than an ounce of pus drawn off, the discovery of the presence of that small quantity of fluid being made by the help of one sense alone, the sense of hearing, the paraceutesis may seem to some to be a small affair, but to my mind there are few operations which require anything like the same amount of thought, or which, when successful, fill us with more satisfaction.'

October 29.

Dr Moore showed two specimens.

1. Part of right auricle, showing fatty degeneration of heart. The patient was a man who died hemiplegic, and whose brain was extensively softened. Such striation, resembling the marking on the feathers of some birds, is perhaps more often seen on the musculi papillares of the ventricle than, as in this example, on the musculi pectinati of the auricle.

2. Piece of ileum, inflated and dried, showing a diverticulum. This was situated about a yard above the ileo-cæcal valve.

Diverticula such as this are remains of the primitive connection between the umbilical vesicle and the intestine.

Meckel remarks that such abnormalities may be as follows :—

1. Persistence of umbilical vesicle.
2. Complete canal from umbilicus to intestine, but no external vesicle.
3. Diverticulum.
    (1.) Attached to umbilicus.
    (2.) To other part of the abdominal wall.
    (3.) To the intestine.
    (4.) Free.

Of the last kind this specimen is an example. Others have maintained that these diverticula are produced by distension, or are chance abnormalities without relation to development. Meckel, who was the originator of the other theory, investigated the subject at length, and has refuted his adversaries' and established his own view.

Mr Watts showed a liver which had been removed from the body of a child, the subject of 'congenital hepatic hernia.'

Mr Adams read a paper on the 'Application of Forceps in Labour.'

The author first pointed out how necessary it was to become well acquainted with the application of forceps in cases of difficult labour, and how certain it was that every one in active general practice would be called upon to perform such operations on their own responsibility.

The aim of their use was said to be entirely conservative, both as regards the mother and child. The history of midwifery forceps was said to be uncertain, and the account of Roueffe of Zurich, in 1554, was stated to be the first known description of them.

In 1650, the brothers Chamberlain first introduced this instrument into England, with the great improvement of separating the blades; the principle of the lock being the same as that in use at the present day, with some modifications.

Some very old instruments, exact copies of those belonging to the Obstetrical Society, were exhibited, both with fixed and separate blades, the former resembling those described by Roueffe in 1554.

Modern instruments were also shown, and those of Barnes strongly recommended, as being of the greatest service in almost all cases. Short forceps were considered much inferior to those with long double-curved blades, and as likely to be a source of mischief rather than good, being successfully used when instrumental interference was not required.

Next, forceps were spoken of with regard to their mechanical action. First, as a tractor; secondly, as a lever; and lastly, as a compressor.

The cases in which their application was recommended were mentioned, and an illustration given, especially showing what great good can be done by their use in long labours.

The manner of applying forceps was then fully considered, laying great stress on doing so with as little force as possible.

Dr Ramsbotham's direction of feeling for the ears and embracing the head laterally was stated to be totally unnecessary, the fact of the vertex presenting, and the parts in a proper condition, being all that was required. The lower blade should be slightly towards the perineum, and the upper one towards the pubes. In most instances the head was grasped obliquely, but the position of the blades on the head need not be taken into account.

Tying the handles together was said to be both unwise and unscientific, and the extraction should take place only at intervals, so as to imitate the natural labour-pains as much as possible.

The indiscriminate use of ergot was strongly blamed, being likely to lead to serious consequences, as its action cannot be depended on, and at times it sets up such inordinate contraction, especially if the resisting power be unusually great, as might lead to rupturing the uterus.

The long delay in the use of forceps was considered to be a source of great mischief, as patients did much better after their early application than when protracted labour had exhausted the strength that would be so necessary to a successful operation. The serious complications, such as ruptured perinea, fistulous openings, floodings, &c., were likely to follow as a result of the long labour, and not from the use of instruments. Cases to illustrate the above facts were given.

Fixed and fast laws as to what particular time a patient should be delivered, as is often stated in books, were condemned, and the circumstances of each case should be taken as the only indication when and how to interfere; and such symptoms as were likely to be of practical use were then enumerated.

In conclusion, it was urged on those present to make themselves as familiar with the use of forceps as possible. The fact that the great majority of men had to go into practice without ever having had the opportunity of either seeing or performing the operation of delivery by forceps, was thought to be bad, both for medical men and their patients. The advantages of a lying-in hospital, such as the Rotunda in Dublin, were considered to be very great, both to the poor who go there, and to the attendants, who have such a field for observation; for we are legally bound to bring a fair amount of skill and knowledge into our practice, and in this case many of us are unable to perform, or see performed, a most important surgical operation.

November 5.

Mr Vernon read a paper on 'The Ophthalmoscope in Medicine.'

The object of this paper was to draw attention to the value of the ophthalmoscope in the hands of the physician, and to define in what cases and to what extent its use might be relied upon in the diagnosis of cerebral disease.

The pathological conditions of the optic discs which are met with under such circumstances were said to be hyperæmia and anæmia, as well as a swollen condition of the nerve, which has been described as 'choked disc,' inasmuch as the appearances are very much as though the circulation in the vessels had been obstructed, and the parts around had in consequence become œdematous and infiltrated. To draw a line which would strictly define where such a condition of parts could be distinguished from that of optic neuritis—where an active inflammatory process is supposed to be at work—would be very difficult, although the distinction is often made.

The various diseases in which one or another of these morbid conditions of the optic disc may be looked for are intracranial tumours of all kinds, cerebral disease of any kind, and diseases of the upper portion of the spinal cord and its membranes.

Irrespective of the optic discs, the fundus oculi is well worthy of examination in all cases of acute tuberculosis, in cases of spinal disease, and in many instances of anæmia. It is probable, also, that in all cases of well-marked mitral and aortic disease, the circulation within the vessels upon the disc will be materially affected, so that the phenomenon of a visible pulsation will result.

In diabetes, also, and in many cases of lead-poisoning, the ophthalmoscope may be of great use. So that it may fairly be said that, in very many and various diseases, no clinical report can be complete which does not contain some note of the condition of the fundus oculi.

November 12.

Dr Moore showed the mesenteric glands, intestine, suprarenal capsules, liver, and spleen, all studded with tubercle, from a child who died with double empyema and tuberculous disease of both lungs.

Dr Moore then read a paper on ‘Quinsy.’

The group of diseases included by Latin writers under the heading *Angina*, by the Greeks under the terms *Lycanche* and *Kynanche*, and by the English under *Quinsy*, has been contracted or extended in various degrees in nearly every important treatise on medicine. Diseases differing in pathological nature, but agreeing in the common symptoms of difficulty of swallowing and difficulty of breathing, have, with a strict adherence to symptomatic classification, been placed under one generic title. It was only necessary that this difficulty should be present, and that it should not be due to lung disease or to stomach disease, for the disorder to be called a quinsy. The old records of cases show the thoroughness with which the definition was applied.* Laryngeal phthisis, polypus of the nose, cancer of the œsophagus, œdema glottidis, are added to the varieties which we now associate with the name *quinsy*. The last was called a watery quinsy. Lower, after whom the elevation between the auricular orifices of the superior and inferior vena cava is named, made an experiment which was supposed to illustrate the causation of watery quinsy. He tied the veins of a dog's neck. The dog, on the second day, died suffocated with œdema glottidis. Lower dissected the swollen head and neck, expecting to find the swelling due to extravasated blood. He was astonished to see that the muscles and other tissues were infiltrated, not with blood, but with serum. He made an advance in knowledge, but later writers drew too wide a conclusion when they declared a watery quinsy, or œdema glottidis, to be always due to pressure of enlarged glands or other tumour on the veins of the neck.

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* See the cases in Van Swieten's Commentaries.

The most useful classification of disease is that which is partly based upon symptoms and partly anatomical.

On this principle *quinsy* may be used as a name for all acute disorders of the upper region of swallowing, which directly prevent or render painful that act. Such may affect the most forward of the parts used in swallowing, the root of the tongue, or they may attack the fauces, or the upper part of the pharynx. These disorders are all of them inflammatory in their nature, and all have a tendency to end in suppuration. All seem idiopathic.

The first-named is perhaps the rarest. An example was to be seen in John Ward about a year ago. The patient was a muscular man, 20 years old. The day but one before admission he fell into a canal, and was chilled after the wetting. The next day he felt some slight difficulty in swallowing, and this increased towards evening. When he came to the Hospital he was unable to swallow, and he could not speak. His tongue, especially at the root, was enormously swelled, but underneath it no abcess could be felt, and there was neither ragged tooth nor external wound that could be looked upon as cause of the swelling. The inflammation seemed a consequence of the wetting. The man's temperature and pulse were considerably raised. His general aspect was one of extreme distress. Ten leeches were put on the outer surface of the floor of his mouth; the bites were allowed to bleed freely into a linseed poultice, and he was given a purge of senna. The next morning the swelling had diminished, and he was able to take a little food, but not to speak clearly. By the next day but one, the swelling had completely subsided without suppuration, and as he was anxious to get home, he soon left the Hospital. Cases of inflammatory swelling of the tongue are not rare, but they differ from this case in that they are due to some traumatic cause, or to inflammation spreading from a pre-existing abscess. This first kind of quinsy, though rare of occurrence, is easy of diagnosis. The third of the forms I have named is perhaps somewhat more common, but its diagnosis is a matter of difficulty. There was a good example in Matthew Ward three years ago. The patient was a painter, 40 years of age. He was admitted with an ill-defined external swelling of the neck, accompanied by considerable difficulty of swallowing. The finger could detect no internal swelling about the fauces. His pulse and temperature were high. The swelling increased. Not one part, but the whole neck swelled. It did not enlarge uniformly all round, but most at the sides, giving the neck a broad, flat appearance. The patient had a very painful sense of distension. He spent day and night sitting up in bed, holding his neck with his hands, and swaying his body to and fro. He could only swallow a small quantity of liquid, and that with great pain. He spoke distinctly, but with some huskiness. He was carefully examined several times, and the general opinion was that he was dying of aneurism. A few days passed, till one night he suddenly felt relieved, and the next day could swallow liquids freely. He had had an acute swelling of the upper part of the posterior wall of the pharynx and adjacent tissues, ending in suppuration, bursting of an abscess, and relief. For several days his pain had been so great that he often said he wished to die; but he left the Hospital quite well. Similar symptoms may sometimes be caused by abscesses connected with disease of the bodies of the cervical vertebræ; but there was no sign of such cause in this case, nor had there been any blow. Its sudden onset, short duration, and rapid termination showed it a case of acute inflammation, ending in suppuration.

Quinsy in these rarer forms is a painful, distressing disorder. It is so in its best-known variety. Its onset is often tremendous. It advances with all the fury of the most dangerous fevers. The temperature is raised to 104°, perhaps to 106°. The pulse is rapid in proportion. The patient's face is flushed. The tongue is furred, and may be dry. There are pains in the loins, vomiting, severe frontal headache. Small-pox, pneumonia, typhus fever, typhoid fever, acute tuberculosis, are perhaps suggested to the anxious interpreter of the symptoms. But 'parturiunt montes.' None of these dire foes of mankind appear. The next day the patient cannot swallow. The fauces are examined. The tonsils and uvula are seen to be greatly enlarged. The latter is often adherent to one of the tonsils. The fever abates, but does not pass off till resolution or suppuration takes place. The following case is an example:—Catherine Ni Maelconaire, aged 18, a domestic servant, was admitted into Faith Ward on December 31, 1872. She had had an attack of vomiting the evening before. She was admitted in the evening. The apothecary who sent her thought she might be going to have typhoid fever. She had lumbar pains and frontal headache. Some one suggested small-pox, which was then about. She had, however, a good vaccination mark. Her tongue was clean at the edges, covered in the middle with white fur. Her skin was without rash: physical examination showed absence of disease in the chest. She said that she had felt soreness about the throat since December 29th. Her tonsils were enlarged and red. T. 104·1°. P. 120. Her bowels had not then been opened for four days. She was given a senna draught. Next morning early her T. was 101·8°, P. 120, and later in the day her temperature was 100·6°. The tonsils were diminished in size. The next day they were still less swollen. On January 3, 1873, the tonsils looked free from inflammation, and her temperature was normal.

She afterwards stated that she had had a similar attack three months before. This was a mild case, except as to its onset. It ended without suppuration. One remark may be made as to the onset. The enlargement of the tonsils, as well when it is acute as when it is chronic, may cause deafness. This gives rise to a seeming dulness on the part of the patient, which, combined with the headache and high temperature, makes the attack look very like the beginning of some grave fever. In most, if not all cases, the bowels have been confined for some days. The quinsy is often relieved by purging. Still the constipation cannot be taken as the cause of the swelled throat, for in the more prolonged constipation of chronic lead-poisoning enlargement of the tonsils is not found. It must also be borne in mind, that not only scarlet fever, but typhoid fever and acute rheumatism, are often preceded by slight sore throat. The prevalence of scarlet fever and the appearance of the rash are perhaps the only certain means of distinguishing its angina from simple quinsy. It is important to think of typhoid fever as now and then beginning with sore throat; for if in the slightest doubt, the physician must withhold his purge till the thermometer has assured him that the lesser disease only is present. The temperature may continue high for a week. Charles Mabbs, aged 10 years, an out-patient at the Children's Hospital, had on the eighth day a temperature of 102·4°; and a Sister of this Hospital, whom I once had to prescribe for, had at the end of a week a temperature of 102°. And this does not directly depend on suppuration; for while in the Sister's case the disease ended by suppuration, in the boy's there was resolution. Nor is the kind which ends by suppuration always accompanied by high temperature. Emma Trollope, a domestic servant, aged 15 years, whose quinsy ended by suppuration on both sides, never had a higher temperature than 100·8°; and James Palmer, aged 18, a patient in John Ward, whose disease ended in the same way, had the same degree of maximum temrature. I am inclined to think that the temperature is in some gree dependent on the constipation; for in all the cases, hower ending, which have been freely purged, I have noticed that he temperature was less high. However big the tonsils, dyspnœa s rare in this quinsy.

The rules of treatment are simple. External applications rarely cause resolution. Leeches, therefore, are to be avoided. Purges of senna, with a low diet till the inflammation subsides, sum up all that need be done. If the pain shoot up to the ear and down the neck, it is relieved by a linseed poultice. Gargles are more painful than useful. Dover's powder at night while there is pain, and after resolution or suppuration decoction of bark, are the only other remedies I can recommend from my own observation.

The most important point for us about quinsy is its diagnosis. It may easily be mistaken for some more dangerous disease; at the same time every febrile condition, without rash and with sore throat, must not be hastily assumed to be mere quinsy.

November 26.

Mr Baker read a paper on 'Some of the Diseases of the Tongue.'

He began by remarking that he had chosen the subject chiefly because a better subject could scarcely be found for discussion, both on account of its intrinsic interest, and of the fact that all must be more or less familiar with it, and therefore in a position to take part in the debate. His object, too, was not to treat of al the diseases of the tongue, or of any one completely, but rather t draw the attention of the Society to certain diseases, and certai points in these, whch seemed especially worthy of notice.

The diseases of the tongue may be divided, Mr Baker said, purposes of discussion, into the malignant and non-malignant, the latter into the syphilitic and non-syphilitic.

He first briefly described the symptoms of the more com form of cancer of the tongue, and proceeded to speak after of the diagnosis from other diseases which were most apt confounded with it; mentioning, as diagnostic signs of value, the pain and extreme tenderness to firm pressure, stages of the disease; and, at the later stages, the evident te to fixity of the organ by infiltration of neighbouring textu the salivation which was the consequence of extreme reflex ir Syphilitic gumma is the disease most likely to be mistaken cer; and the difference, in respect of the above-named sy in the two cases, is commonly very marked, and forms, a better means of diagnosis than the general aspect of the disease, which, in this form of syphilis of the tongue, may in the worst cases mislead. Cases were related and drawings exhibited in illustration of these facts. Other means of diagnosis were referred to, as the position of the tumour, its being single, its consistence, duration, &c.

The treatment of cancer of the tongue was then referred to, especial stress being laid on its removal being early and complete, the completeness being only secured by cutting wide of the part which seemed diseased. Local recurrence, as shown by statistics, has extremely wide variations in point of time in cases of cancer of the tongue; some of the best and some of the worst cases being found in malignant disease of this organ. In the latter cases, however, it is nearly certain that recurrence, so-called, is merely continuance of the disease on account of incomplete removal, which may or may not be the fault of the operator. To cut 'just outside the margin of the part which to the naked eye seems diseased, is commonly almost useless for preventing the return of the disease, though in many cases, when no more can be done, it is useful for the relief of pain for a period.

The various modes of operating were referred to. Reference was also made to the treatment of those cancers of the tongue which, from some circumstance, could not be removed; and the various means of relief were mentioned, as division of the gustatory nerve, the application of tannin lotion, &c.

Regarding the syphilitic diseases of the tongue, Mr Baker said confusion had arisen, because no distinction was made between the different manifestations of syphilis to which the tongue was liable. There are at least four, and, excepting the first-named, which is exceedingly rare, they are all met with commonly enough in the out-patient room to admit of being properly distinguished and studied. They are—(1.) Primary disease, or chancre; (2.) Psoriasis; (3.) Condylomata, or mucous patches; (4.) Gumma.

These different forms were described, and illustrated by drawings, and attention was drawn to the different stages of the disease in which they commonly occurred, and the symptoms in other parts of the body with which they were mostly accompanied. The difficulties in treatment and the causes of these were referred to, and reference made also to the inutility of treating all cases alike—of treating old syphilitic scars as if they could be removed more easily than scars elsewhere—of treating simple ulcers of tongues damaged of old by syphilis as if the present disease were syphilis, and not, as it really is, the result of irritation by teeth or otherwise, which, to a healthy tongue, would do no harm. The treatment proper for the different kinds of syphilitic disease was mentioned, and special stress laid on the relief which could be given by local treatment, as well as by remedies administered internally. The diagnosis was referred to, and the subject finished by noticing what may be called the spurious syphilitic affections of the tongue.

The paper was concluded by a reference to some of the rarer diseases of the tongue, which were illustrated by drawings,—as icthyosis, fibrous tumour, papillary disease, cysts, &c.

December 3.

Mr Brewer read some 'Cases.'

December 10.

Mr Adams showed a specimen of carcinoma of the liver.

Mr Keetley read a paper on the 'Treatment of Simple Incised Wounds.'

As an introduction, it was remarked that this being a subject concerning which the facts known were so numerous, and the ingenuity often displayed so great, while the ignorance was chiefly that shown by the disciples of one school of the real principles and methods of the others, therefore it was a subject peculiarly fitted for debate. A short sketch of the surgery of wounds in the Middle Ages was then given; and the direction of the improvements by and since Ambroise Parés stated to have been towards simplicity, and a leaving Nature trustfully alone, after removing stumbling blocks (sources of local and constitutional irritation) from her path. 'Of this removing sources of irritation there cannot be too much; *of simplicity there easily can be.*' 'Results like those published by Mr Callender and Mr Lister will rarely be attained without there being taken, as those gentlemen took, a great deal of trouble.'

The indications for treating simple incised wounds were then given, under the heads—

1. Hæmorrhage.
2. Cleaning.
3. Adjusting.
4. Rest (including position, ease from pain, from trouble of the mind, and from local irritation, such as putrefying discharges or cold air).
5. Diet and surroundings.

The reef-knot was declared to be the best for catgut as for silk; and catgut ligatures were preferred to other modes of securing vessels of any size (torsion being recommended for small vessels, though further experience has changed the author's opinion about this).

The great arena of debate—viz., the question of immediate dressing and after-treatment—was now entered.

Three postulates were first stated:—

1. Subcutaneous wounds are of much less consequence than open ones.

2. That pus and dead animal tissues rarely putrefy till they are exposed to the air.

3. That there are conclusive experimental proofs that the absorption of putrid pus is very much more injurious than that of fresh pus.

4. That absorption of even the freshest dead pus will cause some fever, and that of putrid pus an affection almost or quite the same as pyæmia.

5. That putrid green pus owes its greenness to microscopic and probably vegetable organisms.

6. That all kinds of true putrefaction and fermentation are accompanied by the development of low forms of life.

7. That the germs of such forms exist in considerable numbers in the air, more especially in that of hospitals and crowded dwellings.

Those who grant all this will then be committed to adopt one of two plans, viz.—Either they must take care that all discharge, all dead and moist pus, shall drain away from the wound, *and even be removed from the ward or sick-room as fast as possible,* or they must so act upon the air which reaches the wound as to kill the germs it contains, and in that way render it innocuous.

In conclusion, the practice of carrying cases out of doors in fine, sunny weather for an hour or two in the afternoon was strongly advocated.

December 17.

Dr Moore showed—(1.) A heart, and large, pale kidney, from a girl, aged 22 years. She died of peritonitis. (2.) Microscopic section of a thickened pylorus, from a gouty old man who died of bronchitis. There was slight narrowing of the pyloric orifice, but this had not been shown by symptoms.

Mr Doran read a paper on 'Wounds and other Injuries of the Urinary Organs.'

The author confined his remarks chiefly to the more important questions of injuries to the kidney and extravasation of urine.

The symptoms of trifling and indirect damage inflicted on the kidney by sprains of the lumbar region, of severe direct wounds and contusions, and the morbid processes they excite, were severally detailed; and some cases were read of extravasation of urine into abscesses around the kidney after injury or following operations on more external portions of the genito-urinary tract.

Mr Doran gave at full length the general and local symptoms of extravasation of urine from all causes, pathological as well as traumatic, and cited rare examples, chiefly to be found in the works of old authors, where recovery had ensued after the extravasated fluid had found its way out through sloughing of the integument before surgical relief could be obtained. Besides relating the very frequent cases of escape of urine into the surrounding tissues by ulceration behind a tight stricture, several instances were read, mostly from the author's experience, where the fluid escaped through a urethral abscess formed during gonorrhœa without a trace of stricture existing, the abscess being not unfrequently due, especially when unilateral, to suppuration in Cowper's glands.

The paper concluded with quotations from the standard works of several modern surgeons, and from clinical lectures on the treatment of rupture of the urethra and extravasation of urine, to show the great difference of opinion among these authorities on the desirability of introducing and retaining a catheter immediately after making incisions.

January 14, 1875.

Dr Church read a paper on the 'History of the Tapeworms found in Man.'

The author first drew attention to the state of knowledge on this subject possessed by the old Greek physicians, and read a translation of Hippocrates' remarks on the Ἕλμινθες πλατεῖαι, to be found in the fourth book about Diseases, which showed that Hippocrates was perfectly well acquainted with the animal nature of tapeworm, and that the proglottides, or melon-seed-like bodies, broke off from the lower end; and that their passage from the bowel was the only trustworthy symptom diagnostic of the presence of tapeworm. Hippocrates imagined that all worms had their origin within the intestines by spontaneous generation, being produced either by too long a retention of fæcal matter in the gut or from corrupting pus. Subsequently the idea arose that they were developed from mucus caused by crude humours in the body; and this theory, which was adopted warmly by the Arabian physicians, was the prevalent one held until the end of the sixteenth century.

Even so late as the year 1844, Dr Wanruct, in a monograph on the subject of tapeworm and its treatment, says—'The origin of a worm, and the coming into existence of a world, excel in like degree the capacity of human understanding.' It was reserved for the present century to see the mystery unravelled, though glimmerings of the truth are to be found in the writings of some of the naturalists of the last century.

The author then went on to speak of the experiments of Küchenmeister, Haubner, and others, more especially those of Leuckhart and Cobbold, with regard to the development of tænia mediocanellata.

Bothriocephalus had been separated from the true tæniadæ as long ago as the early part of the seventeenth century by Felix Plater, Spieggel, and others, but to Küchenmeister belongs the credit of demonstrating the difference between the two common tæniadæ.

A brief allusion was then made to the development of the tæniadæ, and to the number of cases the author had met with in the practice of the Hospital, and he concluded his paper with some remarks on treatment; calling attention to the fact that the remedies we now most rely on for the expulsion of this loathsome guest were identically the same as those which were held in most repute by the ancients, especially the liquid extract of male fern, the bark of pomegranate root, and turpentine. Of these, the author preferred the extract of male fern; and concluded by stating his opinion that tænia mediocanellata was more easily expelled than tænia solium.

January 21.

Mr Milner read a paper on 'Tetanus, with Original Suggestions for a New Method of Treatment by Nerve-Stretching.'

Prefacing his paper by the remark that our knowledge of traumatic tetanus was so limited, and the results of treatment so bad, as to justify any plan of action which seemed to offer a reasonable prospect of success, he proceeded to discuss the subject of treatment—

1st, By operation.
2d, By medicinal agents.

After alluding to the importance of examining the wound for foreign bodies, and any visible cause of irritation about the periphery of the nerves in wounds, he next considered the advantages of—

1. Amputation.
2. Actual cautery.
3. Anodynes.
4. Division of nerve-trunks.
5. Nerve-stretching.

Of these methods, after quoting many cases, and the expressed opinions of Cooper, Abernethy, M'Grigor, Larrey, Murray, Maunder, and others, he concluded amputation to be utterly useless; the results of the application of the actual cautery and the division of nerve-trunks gave more hopeful statistics, and evidence seemed to warrant their further trial. After stating his opinion that the manifestations of traumatic tetanus were due to changes in the cord, produced by irritation of the periphery of the nerve in the wound, and in support of his belief of such a possibility referring to Mr Callender's case of nerve-stretching,* and the experiments of Brown-Sequard, Mr Milner next proceeded to quote at length the cases of nerve-stretching collected and published by Mr Callender, in the 7th vol. of 'Clinical Society's Transactions,' pointing out in each case the close analogy which many of them bore to the phenomena of tetanus. Mr Milner said, that in all the cases quoted by Mr Callender, good had followed the free handling and stretching of the nerve-trunks; and he believed that there was so close a relation between many of the cases quoted and the phenomena of tetanus, that he should not hesitate, should a case of traumatic tetanus come under his care, to freely stretch the nerve-trunks.

The author next passed to the second part of his subject, namely, the treatment by medicinal agents. These he divided into—(1.) General remedies, given with the object of stopping the progress of the disease; (2.) Special remedies, given with the object of controlling the spasms. Of the former class, such as bleeding, mercury, and baths, all seemed equally valueless, tetanus running a definite course unarrested.

Of the latter—namely, those medicinal agents given with the object of controlling the frequency and force of the spasms—he briefly discussed the success which had attended the exhibition of—

1. Nitrite of amyl.
2. Opium and its preparations.
3. Nicotine.
4. Tobacco.
5. Calabar bean.
6. Hydrate of chloral.
7. Chloroform.

Of these, though all had failed, and all had been given, in successful cases, opium and its preparations, Calabar bean (which, however, seemed hardly ever to be given in sufficient doses), hydrate of chloral and chloroform, appeared to have been followed by the best results. Nitrite of amyl had been given with marked good result in relaxing the pain and spasm about the heart.

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* Clinical Society's Transactions, vol. vii. p. 100.

January 28.

Mr Shuter read a case of croup.
Mr Sheehy read a case of hydrophobia.
Mr Sawtell read a case of pericarditis.

February 4.

Mr Wharry read a paper on chorea.

Chorea, interesting alike in its historical features and clinical phenomena, may, judging from accumulated evidence, be safely said to be due to an instability of the corpus striatum, or of adjacent nerve centres; not that the mere fact of these centres being in an unstable condition will produce automatic movements, but the nerve-cells being in a hyper-impressible state, receiving impressions that in health would be imperceptible or arrested in the centres, transmit confused and irregular motor impulses in all directions.

Starting with this assumption, and using the symptoms as indications, we have a fair plan upon which to base our treatment. The marked signs of cardiac depression contra-indicate hydrate of chloral and other depressants. Quinine, being a drug which markedly lessens reflex-excitability, strongly recommends itself, though its alleged tendency to produce cerebral anæmia must be considered: the effect of quinine in ague will be recognised as similar, by those who believe an ague fit to be a reflex expression of visceral irritation; arsenic is indicated where quinine fails. The general anæmia suggests iron in combination with the quinine, and good diet. The abeyance of the sympathetic function, evidenced by the feeble heart, scanty urine, deficient secretion of bile, constipation, &c., imperatively calls for stimulation; and this may be had in the application of a constant current, which should be applied to the trunk and limbs, but especially should a current be passed through the seat of lesion, the corpus striatum, by placing one pole over the supra-orbital artery, and the other over the occipital artery; the current then traverses the sympathetic between these points, passing *en route* along the sympathetic to the corpus striatum; that the sympathetic is thus influenced is proved by the dilatation of the pupil, which must guide the administration, and the sympathetic nerve presides over nutrition.

February 11.

Dr Brunton read a paper on the 'Pathology and Treatment of Albuminuria.'

The author began by observing, that as all the processes of life depend on oxidation taking place in the tissues, any deficiency in the conveyance of oxygen from the lungs to them must necessarily interfere with the vital functions. The oxygen is carried by the red-blood corpuscles, and consequently a diminution in their number, or anæmia, has a somewhat similar effect upon the tissues as want of breathing space in the lungs would produce. It occasions muscular weakness, shortness of breath on exertion, imperfect secretion from the glands connected with the intestinal canal, and consequent dyspepsia, nervousness, palpitation, and œdema. The anæmic condition which has all these unpleasant consequences is frequently induced by the drain of albumen from the system in albuminuria; and this disease is characterised by the symptoms just mentioned, as well as by the presence of albumen in the urine.

Albuminuria is most readily produced by interference with the circulation through the renal veins. This occurs in consequence of tumours pressing on these veins, pregnancy, cardiac disease, especially disease of the mitral valves, obstruction to the passage of blood through the lungs, as in some cases of pneumonia, cholera, and probably by reflex spasm of the pulmonary vessels after cold bathing. Another important cause of albuminuria is denudation of the epithelial lining of the uriniferous tubules, which allows the lymph by which they are surrounded to filter into them. The indications for treatment are, firstly, to remove venous obstruction, if possible; secondly, to lessen the flow of blood to the kidneys, by drawing some of it elsewhere; and thirdly, to diminish anæmia.

February 25.

Dr Godson read a paper on the 'Induction of Premature Labour,' which will be found at page 29.

March 4.

Mr Taylor showed a specimen of disease of the pulmonary valves in a fœtus.

Mr Darbishire read a paper on 'Tumours in the Scrotum.'

March 11.

Mr Reid showed a specimen of melanotic sarcoma of the eyeball.

Mr Hart showed—(1.) An umbilical cord 52 inches long, which had two knots in its course, and had been found coiled five times round the neck of the child; (2.) Twins, the result of an abortion, at 5½ months.

Mr Cumberbatch read a paper on the 'Examination of Aural Cases.'

Mr Cumberbatch divided the cases into—

1st. Those depending on some obstruction in the external meatus.

2d. Those depending on disease of the tympanum or middle ear.

3d. Those depending on disease of the labyrinth.

He next enumerated the instruments required for the examination of deaf patients.

The diagnosis depends on—(1.) Examination of the external meatus, tympanum, and Eustachian tubes; (2.) On certain tests applied to the auditory nerve; (3.) On the history of the case.

The normal appearance of the meatus and membrana tympani was next given, and then the chief abnormal appearances presented by each; then the methods of examining the Eustachian tubes, and the information to be gathered therefrom.

The diagnosis of the disease of the labyrinth by means of the tuning-fork, double and interference otoscope, was next fully explained; and, lastly, the value of the history was discussed.

THE

INDUCTION OF PREMATURE LABOUR.

BY

CLEMENT GODSON, M.D.

Read before the Abernethian Society, February 25, 1875.

The fact that women had given birth to several dead children fter severe parturition, perhaps only completed by embryotomy, nd that when subsequently pregnant, labour had set in premaurely, resulting in the birth of a living child, suggested the idea f anticipating labour by artificially inducing it at a period when he child, though viable, would not be too large to pass through he contracted pelvis.

It is a matter of congratulation to us that the introduction of o important a system should have emanated from our own country, nd the highest tribute of praise is certainly due to those English ractitioners who upheld it, and succeeded in bringing it into eneral practice against such violent opposition; for no one can eny that it is one of the most important improvements in the ractice of midwifery. Denman tells us that 'about the year 756 there was a consultation of the most eminent men at that ime in London to consider the moral rectitude of, and advantages which might be expected from, this practice.' It received their general approval, and it was decided to adopt it in future. The first case in which it was considered necessary was underaken, with success, by Dr Macaulay, Physician to the British Lying-in Hospital in Brownlow Street, in 1756. Very soon afterwards it was performed by Dr C. Kelly. In France, when it was irst suggested, in 1779, its introduction met with the strongest opposition from M. Bandelocque and his followers. The doctors of the Sorbonne declared it a violation of the laws of the Church. Gardien, Carpuron, and Madame La Chapelle firmly resisted it.

They regarded it as immoral, barbarous, and unjustifiably endangering the life of the mother and her child. As late as 1827 it was stigmatised by the Académie Royale de Médecine as immoral. Professor Stoltz was the first in the country to practise it. He did so four years afterwards, in 1831; and in 1852, so great was the revolution of feeling, that the Académie Royale de Médecine declared the operation not only to be not 'immoral'—the term applied to it twenty-five years previously—but to be justifiable, as being less fatal to the mother, and offering a mode of delivery in contraction of the pelvis, certain hæmorrhages, and tumours which are irreducible and irremovable.

In Germany, the celebrated Carl Wenzel, of Frankfort, was the first to declare himself favourable to the operation. In Italy it met with very little opposition, and now for some time past the practice has been universally accepted.

Denman* states that Dr Savage performed it successfully on a lady of title, who had given birth to four dead children after very difficult labours; and Dr Lee† gives the details respecting a patient with deformed pelvis, in whom he induced labour no less than fourteen times. In one case only was the child born alive. The contraction was too great to admit of the operation being delayed beyond the seventh month. For some years after the recognition of the system, the only plan adopted was that of evacuating the liquor amnii by puncturing the membranes, and this method had been handed down from the ancients, by whom it was practised in the earlier months of pregnancy, in order to prevent disfigurement, as Ovid gives it,‡ or that 'the belly may be without the blemish of wrinkles.' Tertullian§ describes the instrument employed thus—'There is also a probe of bronze, by which the destroying is done in a secret, criminal manner; they call it by the Greek term *εμβρυοσφακτής*, that is to say, the murderer of the living infant.'

This, then, which hitherto had been used but for criminal purposes, was introduced as a legal practice, but only in cases of deformity of the pelvis.

During the present century, however, numerous plans have been proposed, and the reasons for the advisability of bringing on premature labour have been so multiplied, that the consideration of the subject is one that merits the attention of us all. I propose, therefore, to enter upon it at once, first considering the reasons which have been deemed necessary for its performance; and secondly, the different methods which have been adopted.

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* Introduction to the Practice of Midwifery, 6th edit., 1824, p. 293.

† Clinical Midwifery, 2d edit., 1848, p. 81.

‡ 'Ut careat rugarum crimine venter.'—*Ovid*, *Amores*, 2, 14, 7.

§ 'Est etiam æneum speculum,' &c.—*Tertullian*, *Liber de Anima*, cap. xiii.

The reasons—

1. When the bony pelvis is too narrow to allow a child at full time to pass without its life being sacrificed.
2. When dangerous affections exist in the mother, such as disease of the heart, ascites, &c., seriously aggravated by pregnancy.
3. Severe symptoms arising from the pregnant state, such as intractable vomiting, jaundice, albuminuria, chorea, mania, &c.
4. When a mother habitually gives birth to children so abnormally large that their lives are sacrificed during delivery, or when several hydrocephalic infants successively occur.
5. When repeatedly the infant has been found to die in the latter months, from disease of the placenta, or other recognised cause.
6. In cases of tumours impeding the passage, such as fibrous tumours of the uterus, exostosis, &c.
7. When sudden hæmorrhage has occurred, and there is reason to believe that the placenta wholly or partially presents.
8. In cases of dropsy of the amnion, and ovarian tumours, productive of great distress to the mother.

1. The first requires no reasoning; it is so well known that a fœtal head, from the seventh to the eighth month of development, is not only of considerably less dimensions than at the full term, but that it is so much more flexible, and capable of being moulded to the passage. And yet, even a seven-months' child may grow into a fine, strong, intellectual man. Of this we have numerous examples. The generally-accepted degree of deformity, necessitating the employment of premature induction, is when the conjugate diameter measures from 2½ to 3¼ inches. If only 2½ inches, the operation should be undertaken at the seventh month; if 2¾ inches, at seven and a half months; if 3 inches, at the eighth month. It will be well to reckon as the seventh month 220 days from the last day of menstruation, 235 days as seven and a half months, and 250 days as the eighth month.

2. Whenever a disease known to exist in the mother is so aggravated by the pregnant state as to place her life in jeopardy, there can be no hesitation in relieving her of that which is the immediate cause of danger.

3. So with intractable vomiting, chorea, and other severe complications arising from pregnancy, it may be necessary to evacuate the uterus, in order to get rid of the cause of irritation.

4. Instances have occurred in which a succession of infants have been born so abnormally large, that it has been necessary to have repeated recourse to craniotomy. In such cases it may be justifiable

to bring on labour before the child has attained its full size. With regard to hydrocephalic infants, Sir James Simpson mentions a case in which, after a lady had given birth to two children in this state, he induced labour with a satisfactory result. A sister of this patient had also been delivered of a child in the same condition. This seems more than a coincidence.

5. There are many diseases of the placenta causing destruction to the fœtus. They may be thus enumerated: Extravasation of blood; inflammation and its consequences; gangrene of portions; general œdema, or dropsy; fatty degeneration; hypertrophy; cartilaginous and calcareous degeneration. These diseases seem frequently to exert their direful influence on the child after it has become viable. I have no experience in such cases, but authors state that, whereas the fœtal pulsations should be regular, and from 120 to 140 beats per minute, when placental disease has set in they become irregular, and either diminished or increased in frequency. If this be so, it is of great importance that abdominal auscultation be practised daily, whenever the previous history of a case gives grounds for suspecting the likelihood of the occurrence of placental disease.

6. In cases of pelvic tumours, incapable of being removed, which would prevent the passage of the fœtus at its full term.

7. It is not uncommon for a sudden attack of hæmorrhage, about the eighth month, to furnish the first indication of placental presentation; and when this has occurred, I am convinced that the proper plan of treatment is to plug the vagina, and bring on labour. Otherwise, though the hæmorrhage may have ceased entirely after the one gush, at any subsequent period it may recur, and to such extent as to cost the patient her life. This is just what happened in a case under my own care, and I shall always regret that I did not then act according to the plan which I am now laying down.

8. Dropsy of the amnion, and ovarian tumours, may occupy so much space as to give rise to very severe pressure effects. In such cases the question of obtaining relief by ridding the uterus of its contents must be considered. If the first condition can be diagnosed, the evacuation of a portion, certainly, of the amniotic fluid, seems to be indicated, and this will probably give rise to premature labour.

With regard to ovarian tumours, it must be borne in mind that Mr Spencer Wells has tapped the ovarian cyst, and even performed ovariotomy during pregnancy, without uterine action having been set up. In his work on 'Diseases of the Ovaries,' Mr Wells* says, 'There is no proof that tapping an ovarian cyst is more dangerous during pregnancy than at any other time; and if there be a large single cyst, tapping will afford immediate relief to distension at a very slight risk to the mother, and lead to the natural termination of pregnancy in the birth of a living child, if proper precautions be taken to prevent the escape of ovarian fluid into the peritoneal cavity, and the entrance of air into this cavity, and into the cavity of the cyst. In cases of multilocular cyst, tapping can be of little use; the rule, therefore, should be to remove the tumour in an early period of pregnancy; and if an ovarian cyst should burst during pregnancy at any period, removal of the cyst, and complete cleansing of the peritoneal cavity, may save the life of the mother, and pregnancy may go on to the full term.'

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* Diseases of the Ovaries, p. 183.

When, however, multilocular tumours are found associated with advanced pregnancy, the question of induction of labour must arise.

Having given the reasons for having recourse to the process of induction, I now pass on to the consideration of the various plans which have been proposed for its performance.

First, let me enumerate them in succession, and then discuss them separately—

1. Evacuation of the liquor amnii by puncturing the membranes.
2. The administration of certain drugs, particularly ergot of rye.
3. The injection of water into the vagina.
4. The injection of water within the uterus.
5. The injection of atmospheric air or carbonic acid within the uterus.
6. Galvanism.
7. Irritation of the mammæ, by means of cupping-glasses.
8. Separation of the membranes from the uterine wall, as far as is practicable, with the finger.
9. Insertion of a long gum-elastic catheter between the membranes and the wall of the uterus.
10. Dilatation of the vagina by means of air-bags.
11. Dilatation of the os uteri by air-bags.
12. Dilatation of the os uteri by means of sponge tents.

1. The old method of puncturing the membranes is still in favour with a great many. I must say that I am strongly opposed to it as a rule. I perfectly agree with what Baudelocque says when arguing against induction of labour. It is the *plan*, however, which he condemns. Probably, had that been known to him of dilatation by sponge tents, his opinion would have been very different.

He says,* 'If we break the membranes before the orifice of the uterus be sufficiently open for the passage of the child, and the action of that viscus strong enough to expel it, the pains will go off in the same manner for a time, and the labour afterwards will be very long and very fatiguing; the child, deprived of the waters which protected it from the action of the uterus, being then immediately pressed by that organ, will be a victim to its action before things be favourably disposed to its exit, and the fruit of so much labour and anxiety will be lost.' What reasoning can be more sensible than this?

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* Baudelocque, System of Midwifery, translated by John Heath, 1790, vol. iii. p. 230.

And yet, in the 'British Medical Journal,' during the last few months, a Medical Practitioner in Cornwall has been attempting, in a series of letters, to run down the sponge method, most ably advocated in a paper by Dr Swayne, of Clifton, and claim superiority for the plan of evacuating the liquor amnii, his whole experience of which is confined to a single case occurring in his practice, which happened to result satisfactorily, just as one hears of the waters breaking in the street, and the child being almost born before the patient could reach her house. But, I ask, is it a matter of congratulation, as a rule, when one finds that the membranes have ruptured before the os uteri has hardly commenced to dilate? Does not experience tell us that the consequence, generally, is a long, tedious labour?

2. The system of administering ergot of rye as a means of bringing on labour prematurely has two great objections. First, it is excessively uncertain in its action; my experience is, that it acts much better in increasing the uterine contractions which have already commenced, while most frequently it fails entirely to start them, even when enormous doses have been given. And it is believed that the drug, taken in large quantity, exerts a direful influence upon the fœtus in utero. I think, therefore, that it should never be employed as the *sole* means of inducing labour.

3. The injection of water into the vagina. This has been employed at a temperature of from 95° to 100° F. for half an hour at a time, the douche directed against the os uteri every four or five hours. The late Dr Tyler Smith recommends hot and cold water alternately. Dr Barnes* says the vaginal douche takes one, two, or more days, and is liable to cause congestion of the lower segment of the uterus. For my own part, the inconveniences of the application, and the uncertainty of its action, would preclude my ever having recourse to it.

4. The injection of warm water within the uterus, which is known as Kiwisch's plan, was introduced by Schweighauser in 1825. Cohein, of Hamburg, in 1846, used it with creosote added. Numerous successful cases have been published; but there is one

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* Lectures on Obstetric Operations, 2d edit. p. 365.

objection to it, which should prevent its ever being again attempted. It places the life of the mother in jeopardy. Lazzati has collected 36 cases in which it was employed, and of these, 12 mothers died. Surely no stronger evidence against it need be adduced. Considering that there should be almost perfect immunity to the life of the mother after other methods, no more need be said to utterly condemn the practice. But Tyler Smith, in his Manual,* strongly recommends it; and as this is popular among students, and very deservedly so, for the clear way in which the mechanism of labour is described, care must be taken not to accept his views upon this special subject before us. It has been demonstrated that the water may pass through the fallopian tubes into the peritoneal cavity; air may be injected into the uterine sinuses; the placenta may become detached; the uterus may be so distended as to become ruptured; or the patient may die from simple shock.

5. The same objections apply to the injection of carbonic acid or atmospheric air, though successful cases of the former have been published by Scanzoni, and of the latter by Sir James Simpson; but deaths from both have been recorded.

6. Galvanism was proposed by Herder in 1803, in order to excite uterine action; but it was not applied to the purpose which is before us till 1844, when Dr Radford, of Manchester, commenced to employ it, and did so successfully in four cases. Sir James Simpson and Dr Barnes have also, formerly, advocated it. Having so much more convenient a method at our disposal, I should never employ it, for it must be most objectionable to the patient, and tedious to the medical attendant.

7. Scanzoni proposed, and tried, the effect of a sucking-pump to the mammæ for the space of two hours. He was successful in two cases: one required seven applications, the other but three. It seems to me a very uncertain and disagreeable method, and one likely to interfere with lactation subsequently, from the irritation to the breasts caused by it.

8. Separation of the membranes from the uterine wall, as far as can be reached with the finger, is a very simple method, and one which in some cases may probably be sufficient; but certainly in the majority of instances further means would have to be adopted. There can, however, be no objection to trying it.

9. Inserting a long gum-elastic catheter between the membranes and the wall of the uterus, and leaving it there, coiling up the end in the vagina, has been found very effectual, but certain objections have been raised to it. It is said that the placenta *may* be partially separated by it, and the membranes *may* be accidentally

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* Manual of Obstetrics, 1858, p. 552.

punctured while pressing it. These should be improbable consequences, and I believe it to be one of the best methods which we have; for, should it fail, it may be followed up by the insertion of sponge tents.

10. In America, the term 'colpeurysis' is used to signify dilatation of the vagina, and a vulcanised gum-elastic bag called Braun's colpeurynter has been employed to dilate the vagina, with the view of setting up uterine action. While stretching the vagina, it is supposed to act also upon the os uteri, and Dr Meigs* says it is found that about four hours suffice to dilate the os uteri sufficiently to provoke good labour pains. I do not know that it has ever been carried into practice in this country.

11. Dilatation of the os uteri by elastic bags was proposed by Dr Keiller, and has been brought prominently forward of late years by Dr Barnes, who has introduced an improved form of bag for the purpose.

Speaking of the different methods for provoking the uterus into action, Dr Barnes † says, 'Now, active labour may come to pass in twelve or twenty-four hours, or in two, three, four days, or even later. There is no certainty about it. When labour comes, the child is expelled with little warning, almost suddenly, and before the medical attendant can be fetched. And it has to run the gauntlet of all those perils which especially surround premature labour unaided. It is just as feasible to make an appointment at any distance from home, to carry out at one sitting the induction of labour, as it is to cut for the stone.' Dr Barnes puts in an elastic bougie over-night, which, he says, gives rise to uterine action; next day he introduces his bags. Uterine action has been set up by the bougie, in other words, labour has commenced; why then interfere with a process which, started artificially, may be completed gradually by the efforts of nature? If this argument of carrying out the process of labour 'at one sitting, as one would cut for stone,' applies in premature labour, why should it not in labour at full term? If not likely to be followed by evil consequences, it would be a great boon to the medical attendant. To be kept about by a patient whom one has found in the first stage of labour is extremely trying. How much time and annoyance would be saved if we could proceed at once to 'carry out at the one sitting' the delivery! And I cannot see why it should apply in one case more than in the other. Barnes' bags are of the utmost value when it is desirable to complete the labour in as short a time as possible—for instance, in puerperal convulsions; but in induction of premature labour, for causes not requiring hurry, to my mind their employment partakes too much of an operation, when there is no necessity for such discomfort to the patient.

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* Treatise on Obstetrics, Philadelphia, 1863, 4th edit. p. 584.

† Lectures on Obstetric Operations, 2d edit. p. 363.

Lastly, we have to consider the method of dilating the os uteri by means of sponge tents. It was proposed and put into practice with great success by Brüninghausen and Kluge; Velpeau strongly advocated it; and finally, Sir James Simpson, who had tried a variety of means, adopted this in preference to any other. I am convinced, with him, that it is by far the most preferable. In 1872 I wrote a paper in the 'Lancet' in favour of it,* describing an instrument which I had designed for facilitating the introduction of the tent. Dr Bedford,† of New York, says, 'It may be found extremely difficult, in consequence either of resistance or malposition of the os, to introduce the sponge, and the abortive attempts made to accomplish the object may induce more or less irritation of the parts.' I found also this difficulty, to overcome which I had the instrument made.

Quoting from my paper in the 'Lancet'—

'The means I advocate operate by surely and safely coaxing the uterus into an action which only differs from natural labour in being artificially initiated, and which is maintained and completed, under all the conditions of labour spontaneously occurring at a corresponding stage of pregnancy. Each of the methods in general use is, according to my experience, more or less formidable, in virtue of the amount and the kind of the manipulation which it involves. Most of them are practised in such a manner as to force on too hurriedly the uterine contractions; and that which consists in the evacuation of the liquor amnii stands self-condemned, as depriving the womb, at the very outset, of the all-important dilator provided by nature.

'My mode of procedure consists in insinuating, night and morning, between the cervix uteri and the membranes, sponge tents of gradually increasing size; the first, and each succeeding one, being as large as the parts will admit. On removing each tent, and before replacing it by another, a warm douche, containing Condy's fluid, is administered. I have found the use of one, two, and three tents to be sufficient, and have never had occasion to employ more than four.

'The instrument by means of which the tent is placed in position is made for me by Messrs Arnold, of West Smithfield. It is shown in the accompanying illustration, and will be found fully described in the 'Lancet' of April 22, 1871.

'It entirely obviates the use of the speculum, and being provided with what is equivalent to a universal joint, it enables the tent to be pushed, without extraneous guidance, between the cervix and the membranes, taking of itself the readiest path presented to it. For the same reason the membranes run no risk of puncture. The tents themselves are short, rounded at the extremity, and perforated, to facilitate adaptation to the instrument.

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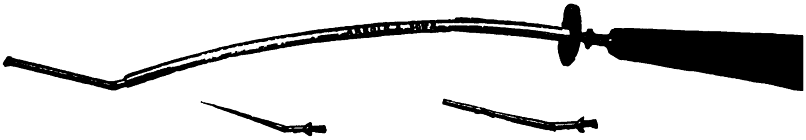
* Lancet, Nov. 23, 1872.

† Bedford, Principles and Practice of Obstetrics, 4th edit. 1868, p. 676.



'The apparatus, and the mode of its application, are so simple, and so free from inconvenience and danger, that its use causes in practice little or no anxiety on the part of the patient; and until labour sets in, she moves about without pain or inconvenience, regardless of the presence of the tent.'

The plan was introduced by me at the City of London Lying-in Hospital in 1869, when I held the appointment of Surgeon-Accoucheur to that institution, and it is still carried on there by my successor, Dr Burchell.

The following table gives the record of twenty cases in which the practice described was performed, the last thirteen of them by Dr Burchell:—

Case.	Where Performed.	Date of First Tent.	Date of Delivery.	Result to Child.
1	Lying-in Hospital.	1869. Dec. 3.	Dec. 5.	Still-born.
2	,,	1870. Feb. 3.	Feb. 6.	Living.
3	,,	1870. March 16.	March 17.	Putrid.
4	,,	1870. April 12.	April 15.	Still-born.
5	Private Practice.	1870. Aug. 6.	Aug. 8.	Living.
6	Lying-in Hospital.	1871. March 4.	March 6.	Still-born.
7	,,	1871. May 8.	May 10.	Living.
8	,,	1871. Aug. 9.	Aug. 11.	Still-born.
9	,,	1871. Aug. 31.	Sept. 2.	Living.
10	,,	1872. March 28.	April 1.	Still-born.
11	,,	1872. Sept. 7.	Sept. 10.	Living.
12	,,	1873. Jan. 17.	Jan. 19.	Living.
13	,,	1873. March 2.	March 5.	Living.
14	,,	1873. April 16.	April 19.	Still-born.
15	,,	1873. June 24.	June 27.	Living.
16	,,	1873. Dec. 29.	1874. Jan. 1.	Living.
17	,,	1874. April 30.	May 3.	Still-born.
18	,,	1874. May 27.	May 29.	Still-born.
19	,,	1874. July 9.	July 11.	Still-born.
*20	,,	1875. April 29.	May 1.	Living.

* This case has been added since the paper was read, to make the table more complete.

All the mothers recovered with the exception of one, that in which the child was born putrid, and she died of puerperal fever, which was then raging in the Hospital. The patient had given birth to all her former children in the same state, and that was the reason why labour was induced. From an analysis of this table, it will be seen that half of the children were born living, 1 within 24 hours of the introduction of the first tent, 10 within 48 hours, 8 within 72 hours, and 1 within 96 hours.

In the 'St Bartholomew's Hospital Reports,' vol. v., will be found an analysis by me of the midwifery cases occurring in connection with the Hospital during a space of seven years, from 1862 to 1869:—'Induction of labour was resorted to in seven cases, one in 819·14; four times with head presentation, 57·14 per cent.; once with foot presentation, once with breech, and once with placenta prævia. Four children were born living, 57·14 per cent.; and three were still-born, 42·86 per cent. All the mothers recovered.'

This again will be found a very fair average. Unfortunately no record was made of the presentations occurring in the twenty cases included in the table, but from the St Bartholomew's statistics it will be observed that three out of the seven were abnormal, and this tendency to malpresentations in premature parturition is one of the chief causes of the children not being born living.

Looking at all the statistics which have been published, it appears that rather more than half the children are saved, whatever plan be adopted. In most of the records no one system has been adhered to. The result to the mothers, however, is greatly influenced by the method employed. The danger ought not to be greater than that after ordinary premature labour, but I have already shown that, under certain systems, the mortality has been very large. Such systems, therefore, should be altogether discarded. I have met with several instances of patients who had had more than one plan carried out for procuring induction before the sponge-tent method was adopted; and I feel confident that no one would doubt the superiority of the system which I have advocated were they to hear from the patients' lips what comfort they have derived from the change of treatment, and what great anxiety has been spared them.

THE

ABERNETHIAN SOCIETY

ST. BARTHOLOMEW'S HOSPITAL.

REPORT OF PROCEEDINGS.

SESSION 1875-76.

LONDON:
SMITH, ELDER, & CO., 15 WATERLOO PLACE.
1876.

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THE ABERNETHIAN SOCIETY having determined in Special Meeting that it was advisable to publish a Report of its Proceedings, appointed a Committee to carry the project into effect. The Committee therefore drew up the following Rules, which were accepted by the Society at the General Meeting:—

1. With the approval of the Editors (of the Hospital Reports), that the Proceedings of the Society should be published in the Hospital Reports as heretofore, but in more detailed form, and that afterwards reprints should be thrown off for distribution among its Members.

2. That the papers for publication be selected by a Committee consisting of the two Presidents, two Vice-Presidents, two Hon. Secretaries, and the Hon. Treasurer.

3. That the reprints shall be stitched in the form of a pamphlet, and shall contain a complete List of the Members of the Society for the last five years, and a Table of Contents shall also be provided, with a printed cover.

4. That copies be distributed, free of charge, to Members who are not of more than five years' standing, and that those of more than five years' standing may obtain copies on payment of one shilling each.

5. That these Rules be also printed in each copy of the Proceedings for the information of Members.

SESSION 1875-76.

OFFICERS.

lents—Mr. DORAN and Dr. VINCENT HARRIS.

Presidents—Mr. KEETLEY and Mr. MACREADY.

Honorary Treasurer—Mr. SAVORY.

ry Secretaries—Mr. HAMES and Dr. R. WHARRY.

ENTLEMEN WHO HAVE BECOME MEMBERS OF THE SOCIETY
DURING THE PAST FIVE YEARS.

-72.

. H.

M.
J.
s, E.
W.
V. H.
G.
T.
. C.
R. W.

C.

M.

. H.

W. F.

. H.
, W. F.
J.

1872-73.

Alderton, F. G.
Andrews, S.
Baillie, R. H.
Brumell.
Cobbold, G. W.
Cooper, A.
Crétin, E.
Day, C. H.
Dixon, T. A.
Dunn, H. B.
Evans, F. W.
Field, A. F. F.
Hales, R. T.
Hall, F. de H.
Harris, V. D.
Harrison, C. E.
Hastings, G.
J'Anson, W.
Livesay, E. W.
Macready, J.
Moore, C. A.
Ormerod, J. A.
Pooley, W. M.
Roeckel, W.
Rule, G. H.
Russell, J.
Sheehy, W. H. P.
Sloman, H.
Smith, G.
Steavenson, W. E.
Ward, A. G.
West, S. H.
Williams, A. G.
Williams, J. W.

1873-74.

Carcenac, E.
Edwards, A. E.
Farrington, D. W.
Ferrand, C.
Glyn, H. A.
Hames, G. H.
Hart, N.
Heath, W. L.
Hepburn, A.
Hindle, G. R.
Howat, G.
Hutton, E. R.
Jackman, G. F.

Keetley, C. R. B.
Little, H. S.
Lucas, H. O.
Malden, F.
Peacey, W.
Peevor, H.
Prosser, T. G.
Pye, W.
Ranking, G. S. A.
Robertson, F. F. A.
Schofield, R. H. A.
Shoolbred, W. A.
Smith, Gerald.
Spooner, F. H.
Thomas, J. R.
Watts, F.
Wharry, R.
Wilmot, J.

1874-'75.

Abercrombie, J.
Adams, J.
Bamber, C. J.
Bateman, A. G.
Calcott, J. B.
Campbell, J. M.
Chapman, H. F.
Clarke, W. Bruce.
Collingridge, W.
Cripps, E. C.
Dennys, G. W. P.
Dingley, A.
Edmunds, R.
Edwards, F. S.
Eve, F. S.
Gabb, C. B.
Good, F. T.
Kidd, P.
Lyons, Isidor.
Paget, G. E.
Patterson, G. H.
Roughton, J. W.
Thurland, F. E.
Waylen, S. A.
Weiss, H. F.

1875-'76.

Adams, A. P.
Anderson, A.
Ashton, C.
Baker, W. J.
Baker, W. T.
Blaikie, J.
Blakeney, H. F. B.
Bradford, A. S.
Bradshaw, J. D.
Bruce, R.
Burgess, W.
Burlton, A. H.
Colenso, R. J.
Craddock, F.
Craven, R.
Cumming, R. F.
Cuthbert, C.
Cuthbert, W.
Dingle, W. A.
Dixon, G.
Falkner, J.
Gayton, F. C.
Gaze.
Gill, R.
Gipps.
Hart, A. P.
Hasleden, R.
Hooker, C.
Johnson, G.
Kirsopp, T.
Langdon, J. W.
Lewis, T. H.
Lillies, H.
Lockwood, C. B.
M'Kee, G.
Mackrell, A. S.
Morse, E.
Moullin, N. M.
Paulley, J.
Plumbe.
Prowse, A. S. W.
Redmayne, R.
Steele, H. F.
Sugden, D. A.
Tait, E. S.
Taylor, W. C. E.
Townshend, K.
Trevan.
Webb.
West, E. de L.
West, W. F.
Wharry, A. J.
Whitley, C.
Wickham, W.
Woodward, F.

PROCEEDINGS

OF

HE ABERNETHIAN SOCIETY

FOR WINTER SESSION 1875-76.

October 14, 1875.

. Willett delivered the introductory address.

. Moore showed the following pathological specimens:—

The heart from a child (who was cyanotic during life) with rent pulmonary valves, the orifice being the size of a goose- . The septum ventriculorum was incomplete.

A piece of the temporal bone with disease of the mastoid The patient had a cyst in the cerebellum.

Part of the hind leg of a dog showing osteo-arthritis.

October 21.

. Shuter showed the following microscopical specimens:—

A longitudinal section of the supra-renal capsule and ey of a rat (injected).

A longitudinal section of a rat's tail.

r. Bruce Clarke showed a large hydatid cyst.

. Shuter read a paper on 'The Causes of Progressive cular Atrophy.'

October 28.

r. Bruce Clarke showed some specimens of echinococcus.

r. Wharry showed a specimen of a kidney with fatty and id change and capillary embolism.

r. Schofield showed some microscopical specimens.

Mr. Butlin read a paper on 'Cancer of the Breast following Eczema about the Nipples.'

Of course you are all aware that many attempts have been made to discover the causes of cancer; that numberless theories have been put forward by different observers at various times to account for the occurrence of cancer; that, nevertheless, the question is still almost if not quite as undecided as it was in the infancy of pathology. Perhaps the most probable of all the theories which have been advanced is that so warmly supported by the greatest of German pathologists, Virchow,[1] which ascribes the formation of cancer to some actual injury or irritation. The subject is ably argued by this observer, and particular care is taken to point out how the most exposed parts, whether internal or external, are always those most liable to be effected by cancer. Of external parts, the lower lip, the various organs of generation; of internal parts, the tongue, the œsophagus, stomach, and rectum. We place so much reliance upon these theories that we are always most careful to remove as far as possible every source of long-continued irritation, and to heal ulcers about the mouth, anus, &c., lest these perchance should give rise to the much and justly dreaded disease; for we are obliged to admit that when once a cancer has formed it is absolutely incurable. We may remove it by any means in our power: it will inevitably recur at some nearer or more distant point, will in time affect the lymphatic glands, and will finally, if time be given it, prove fatal. What we want to know is some sign or signs which shall foretell that cancer will certainly occur in some particular part of the body at no very distant period. Had we such signs, we should not hesitate to remove if possible the whole of the part expected to be attacked.

In the Hospital Reports last year (1874) Sir James Paget pointed out such a precursory sign. He says, 'I believe it has not yet been published that certain chronic affections of the skin of the nipple and areola are very often succeeded by the formation of scirrhous cancer in the mammary gland. I have seen about fifteen cases in which this has happened' (p. 87). A statement of this nature coming from so distinguished a surgeon merits every consideration. Opinions vary very much as to the precise value of the communication; but some surgeons are so confident of its truth, and have observed the same connection so often between chronic eczema of the nipple and areola, and carcinoma of the breast, that I have twice had an opportunity of examining breasts which have been completely removed on account of the eczema, although there was no evidence of cancer in either. The operation in each case was performed by one of our own surgeons. The first was a private case of Mr. Savory's. The breast, together with an elliptical portion of integument, including the areola, was removed from a lady 57 years of age. The nipple was indistinguishable; the whole of the areola was thickened and crusted over with dry yellow and grey scabs; there was no disease apparent in any part of the breast save about the areola. This eczematous condition had existed for about two years, not yielding to any treatment, causing continual annoyance and distress to the patient, and at length proving so troublesome that the lady readily submitted to the serious operation performed by Mr. Savory. It may be said, Would it not have been sufficient to have removed the diseased areola? Well, Sir James Paget says that he has twice done this, but that it was 'too late,' by which I suppose he means that the breast became cancerous after the removal of the part.

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[1] Krankhaften Geschwulste, vol. i.

The second case was an Hospital patient, 52 years old, under the care of Mr. Smith, in Lucas Ward. She had been troubled with eczema about the areola for nearly three years, and the condition of the nipple and areola was very similar to that described in the last case. In addition, however, there was an ill-defined mass of induration at the upper and inner part of the breast, apparently not cancerous, but merely of a chronic inflammatory character. This was stated to have been noticed some two or three months. A consultation was held on this patient in the Theatre, and the opinion of those present was unanimously in favour of complete removal of the breast. When the indurated part was cut into after the operation, it bore a very suspicious resemblance to certain forms of cancerous infiltration, and I should not have been surprised had I found the microscopic characters of carcinoma.

Portions of each breast were hardened for some days in chromic acid, were then placed for a week in spirit, and were finally cut with a razor, coloured and mounted in glycerine or Canada balsam. Sections were made in each case through the areola completely down through the breast, so that perpendicular sections of an inch or more in depth were cut. Sections were also made of the indurated portions of the second breast.

The changes discovered were so exactly similar in the two breasts that one description will suffice for both, a slight addition being only necessary for the indurated portions of breast.

The mucous layer of the epidermis of the areola had undergone proliferation; its cells were increased in number, many of them contained two nuclei; whilst at intervals there were fibres or fibre-cells passing upwards between the cells towards the surface.

The corium and subcutaneous tissue were infiltrated with large numbers of small round cells like leucocytes. These are the ordinary changes which have been discovered and described as produced by chronic eczema, therefore there was nothing surprising in the fact that they should occur here.

But in addition to these changes, the galactophorous tubes or milk-ducts were all found widely dilated, whilst their epithelium, instead of being the ordinary form of cylindrical cell, arranged so as to line the ducts evenly and regularly, was now composed of squamous or spheroidal cells, irregularly disposed upon the walls, often jutting out in uneven masses into the interior of the ducts, and even in some cases completely filling them, so that no lumen was visible.

And in the fibrous tissue, lying generally not far distant from the ducts, was the same sort of small-cell infiltration as that occurring in the corium and subcutaneous tissue.

These conditions existed through the whole depth of the sections—for an inch or more, therefore, below the surface of the eczematous skin. That they were continuous from the most superficial to the deepest parts there can be little doubt, for although they could not be traced continuously in any one section (as might be expected from the nature of such sections), they existed in every section, and in all parts of such sections.

The indurated portions of the second breast showed a similar dilatation of the milk-ducts, a similar alteration in their epithelium, and a similar infiltration of small cells in the surrounding tissues.

There was also increase in size of the acini of the mammary gland and proliferation of the glandular epithelium.

There was not any tissue deserving of the name of carcinoma. All the induration appeared to be due to the enlargement of the ducts and acini, the increase in their epithelial elements, and the small-cell infiltration of the surrounding tissues.

Such were the changes in these two breasts which could be traced from the diseased areola, and which may therefore be fairly supposed to have been caused by the irritation of the long-standing eczema, perhaps also by the remedies which had been employed for the cure of the latter. They do not, you see, in either case amount to carcinoma; nor can it be said that carcinoma would inevitably have supervened. I think, however, this would probably have been the case in the indurated part of the second breast; for the changes which were observed in this part were exactly the same in character as those often seen in the outskirts of a growing carcinoma of the mammary gland, exactly the same, therefore, as those changes which may be supposed immediately to precede the development of carcinoma in the gland.

What practical lessons are to be learned from a consideration of the facts just stated? What are we to do in cases of long-standing eczema or psoriasis of the areola—in cases which have lasted, for instance, for two or three years in spite of treatment? Are we to persevere in treatment? Are we to remove the diseased portions of integument, or are we justified in removing what appears to be an entirely healthy breast in order to prevent it becoming cancerous at a later period?

Sir James Paget tells us that clinical observation has led him to believe that in all cases carcinoma forms in breasts in which the areola has been the seat of chronic eczema, and that the time of the supervention of cancer varies from one to two years.

Other surgeons of position—Mr. Savory, for instance—have noticed the same thing, and believe most thoroughly in eczema as a precursor of cancer.

Yet it must be confessed that we very rarely obtain the history of pre-existing eczema of the areola in the cases of carcinoma of the breast which come under our notice in the Hospital. Mr. Arnott of St. Thomas's Hospital, who has been working long and carefully at the subject of cancer, tells me that since the publication of Sir James Paget's paper he has made careful inquiry in every case of cancer of the breast, but has failed to elicit in even a single instance any connection between eczema and cancer.

Still such negative evidence as this cannot of course be compared with the positive evidence to the contrary; it only proves that carcinoma of the breast is by no means frequently due to the irritation of eczema. And this is what might be expected; for whereas carcinoma of the breast is very common, chronic eczema of the areola is, I believe, comparatively a rare disease.

The pathology of the disease, as we have learned it thus far, would decidedly incline us to adopt the radical measure of removal of the whole breast, since nothing short of this would certify us that all the altered textures were removed.

Nevertheless, I think we require a larger experience, both clinically and pathologically, than we have at present, before we shall be justified in removing breasts for eczema about the nipple. The mutilation is so extreme, the operation so considerable, even occasionally hazardous to life, that I think we shall be rather justified in watching for some time to come all such cases with the greatest care, even at the risk of losing a certain number of patients from cancer.

November 4.

Mr. Hastings showed the stomach and intestines of a patient who died from malignant disease of pylorus with secondary deposits.

Mr. Schofield read the notes of two cases of loco-motor ataxia.

Dr. Godson read a paper on 'Subinvolution of the Uterus.'

Subinvolution of the uterus is perhaps the most common of all the conditions which we find among those who apply for relief in the department of the Hospital devoted to the diseases of women.

It is only of late years that this affection has been recognised. It does not even find a place in the 'Nomenclature of Diseases.' Many of the older practitioners, at all events those who do not find time or inclination to keep themselves posted in the medical literature of the day, know not even the meaning of the term, and the consequence is that the question is frequently put, 'What is subinvolution?' You all know that when an ovum has found its way into the uterus, this organ at once sets to work to adapt itself to the requirements of its tenant. It has not only to increase the size of its chamber, but it has to make itself the medium of communicating the nutrition which shall contribute to the support and development of its occupier, and so the little uterus must undergo great and important changes. In fact, its mucous membrane becomes hypertrophied, the tubular glands enlarge, the lymphatics become extremely big and numerous, the arteries become larger and more convoluted, the veins attain a greater capacity and expand into sinuses, and the fibre-cells grow into strong muscular fibres.

All this is, of course, not effected at once; the uterus gradually adapts itself to the increasing wants of the fœtus. And so, as soon as it has lost its tenant, robbed of the importance which was hitherto attached to it, it sets to work at once to return to its pristine state, to be ready for any fresh duty which may be imposed upon it. This retrograde change is called 'involution.'

And if anything takes place to interfere with this process, leaving the uterus just in the condition it has then reached, this state of arrest is recognised by the title of 'incomplete involution,' or, as we better know it, 'subinvolution.'

Our next inquiry is, By what means is an organ, measuring fourteen inches in length and weighing twenty-five ounces, reduced so greatly that, in a very few weeks, it measures but three inches in length and weighs only two ounces? In other words, How is the process of involution carried out? Delivery having taken place, the cavity of the uterus is at once diminished in size by the muscular contraction of its walls, the arteries and veins on their part contract, and about four days subsequently the muscular fibres commence to undergo a process of fatty degeneration, so that in from six to eight weeks' time not a trace of their existence should remain other than fibre-cells. In this process the lymphatics are said to assist greatly. The fatty degeneration commences in the inner layers of the walls, and passes from them to the outer layers. Under the microscope, a few days after delivery, a series of glistening particles are seen deposited in the course of each individual fibre. Now it must be borne in mind that this change occurs at whatever period parturition take place, so that subinvolution may arise after abortion as well as after labour. And inasmuch as the exciting causes are greater after abortion than after delivery at full term, I believe we shall find that the disease under discussion occurs even more frequently after the former than after the latter.

We must now pass on to the consideration of the causes which are likely to check the progress of involution.

First, and foremost, any febrile condition or constitutional disease seriously affecting the general health is likely to produce uterine atony, and so give rise to it.

Secondly, absorption of septic matter, or whatever may cause inflammation of the pelvic viscera, is sure to arrest the process. How frequently we hear of suppression of the lochia! and is not this a manifestation of it? Later on, and this is perhaps the most frequent cause of all, uterine congestion is likely to occur from many circumstances: too early, and too frequent sexual indulgence, assuming the upright posture, and moving about without restraint while the uterine walls are still thickened, and the weight of the organ much increased; and this is naturally liable to give rise to displacements, so frequently found in connection with subinvolution. The rectum, too, is in such intimate relationship to the uterus, that constipation, hæmorrhoids, and the like have a tendency to interfere with the physiological process. What, then, are the symptoms which lead us to suspect this condition?

The patient resumes her ordinary occupations, or endeavours to do so, and finds that this is attended by great discomfort; there is a sense of weight, or bearing down of the womb, sometimes amounting to actual pain: and this is frequently referred to the lower back, to the sacral region; she feels as if she required a support, and suggests the application of a strengthening plaster to the part. In addition to this there is uneasiness in the bladder, she has a frequent desire to empty it, and finds it inconvenient to be so situated that she cannot thus relieve herself

There is also a feeling of pressure on the lower bowel, and frequently difficulty in evacuating it. Another, and a most prominent symptom, is in connection with menstruation, should it have recurred. As a rule, whereas before pregnancy it continued for five or six days, moderate in amount, with an interval of three weeks or more, it lasts now from seven to nine or ten days, and is very profuse, and, after the lapse perhaps of only a fortnight, it again makes its appearance. Most commonly, too, the patient suffers from a troublesome leucorrhœa, of a watery character; she has to constantly change her linen. She attributes it to weakness, and uses astringent lotions injected into the vagina; but she gets no better, and at length applies for medical advice. And at this stage she comes under our observation. On making an examination, what do we find? and how should this examination be conducted?

First, never omit to investigate the abdomen. On placing the hand on the hypogastrium, and making firm pressure, we perhaps feel a globular body occupying it, which we at once suspect to be the enlarged uterus. There may or may not be tenderness present. With the left hand still on this swelling, the forefinger of the right is passed into the vagina; its walls are probably found lax, and bedewed with moisture; it is found diminished in length, because the weighty uterus is low. Next, the condition of the cervix is investigated, and it is found short, very likely correspondingly increased in diameter, and the mouth of the womb allows the finger to pass readily within it—the patulous os, so well known. If the condition be one of simple subinvolution, the texture is found soft and flabby, just as if parturition had but recently occurred; but if inflammatory action have been set up, we find it, on the other hand, firmer in texture than it should be—*indurated,* as we describe it—and the lips probably everted.

And this brings me to the two forms of subinvolution which you have so frequently heard me speak of in the Out-Patient Room—simple subinvolution and inflammatory subinvolution—two very different conditions, and equally common.

The inflammatory is that which we generally find at a later stage, the simple form having previously existed, and the areolar hyperplasia, as Thomas terms it, being a consequence of inflammatory action subsequently occurring in the uterine tissues.

Having ascertained as far as possible by the impulse conveyed from the hand on the hypogastrium to the finger on the cervix the extent of enlargement, the condition of the cervical tissue is carefully noted, whether or not it feel abraded, or whether fungous growths appear to exist.

The next step is to sweep the finger round the cervix to ascertain the state of the original roof, whether or not any abnormal swelling be present. It should be elastic to the touch, but if there be a displacement of the uterus, which, as I have before stated, is a frequent complication, the absence of the fundus uteri in the hypogastrium having perhaps suggested it, a resistance in the form of a swelling may be discovered in some relation to the cervix, most commonly posteriorly, or anteriorly; or the hypertrophic walls of the uterus may be felt bulging in every direction.

Having carefully ascertained that there is no reason to suspect pregnancy, and no other cause to suggest delay in employing the uterine sound, it may be passed within the os. By means of this instrument we shall be able to ascertain whether the cavity of the womb be increased in length, or in general capacity: instead of measuring 2½ inches in length, it will probably be found to register 3 or 4 inches; and any swelling in the roof of the vagina which may have been previously noted, should it be the body of the uterus, will have disappeared in case of flexion; or if retroversion exist, the concavity of the sound will have entered in an opposite direction to that in which it should, and on being twisted round gently with the finger and thumb, the uterus should move with it, and be capable of being replaced. If, however, the cavity be much enlarged, as is frequently the case, the sound may be turned round within it, producing but little impression upon the uterine walls. Having ascertained so much by the sense of touch and the use of the sound, the speculum should be passed within the vagina, in order to get a view of the cervix. Frequently in its passage it will have collected a quantity of *discharge* within it, and this must be wiped away before we proceed further, and the character of it noted. In all probability the epithelium will be found more or less denuded from the surface around the os, and sometimes fungous-looking growths are observed, extending as far as we can see within the cervical canal; these may be partially obscured by a very tenacious discharge, on wiping away which, with difficulty, by means of a piece of cotton wool held within the speculum forceps, the surface is at once excited to bleed. This is the condition so frequently found associated with simple subinvolution. In the other variety the cervix will probably fill the entire summit of a good-sized speculum, the mucous membrane appears blue and distended, and a highly-tenacious plug is observed blocking up the os uteri. There is generally a certain amount of epithelial abrasion.

We pass on to consider the plan of treatment which should be adopted for the relief of these conditions.

Let us take the simple variety first.

This is generally associated with anæmia and broken-down health, and our efforts must be directed to improve such as much as possible by means of tonics, cod-liver oil, change of air, and good diet. There is one drug specially indicated, and this is iron. Another is the ergot of rye. The uterine fibres are wanting in contraction, to remedy this we look to ergot. It should be administered in doses ranging from twenty to forty minims three times a day. It seems to act more powerfully when combined with strychnia. I generally prescribe a mixture of the ammonio-citrate of iron, with the liquid extract of ergot, and liquor strychniæ, the latter in doses of four minims. It is a great thing to avoid constipation, and this preparation of steel seems less likely to give rise to it than any other. The rectum is situated so close to the uterus that a great effort must be made to keep off pressure from it upon the womb, and in all uterine affections the regular action of the bowels is the first thing to be attended to. If, therefore, aperients be necessary, they must be prescribed. The vaginal walls being equally relaxed, astringent lotions or suppositories should be employed. The lotion must be injected by means of a proper vaginal syringe, perhaps that known as Higginson's is the best. The glass syringe so commonly used by the poorer classes is worse than useless, it is dangerous, and should never be employed. The support of a pessary may be needed, but unless well adapted, and borne with comfort, it only increases the mischief. If with all this improvement does not take place, it will be necessary to adopt some more active plan of treatment. I have found great benefit from passing into the uterus, as often as the opportunity occurs—say on alternate days—a strong solution of perchloride of iron, by means of a piece of cotton wool saturated with it attached to a Playfair's probe. This serves two purposes: first, and foremost, it excites the uterus to contract. When inserted, it finds its way into the uterus, perhaps only barely touching the walls of the cervical canal; but on attempting to withdraw it, it will be found to be tightly grasped by them. The other purpose which it serves is that of a styptic; thus applied, it tends to overcome the menorrhagia to which I have referred.

Thomas says that fungous degeneration of the villi is frequently associated with this state, and for such the perchloride of iron would admirably apply.

The inflammatory variety is that, however, which demands the most active treatment. It is with this that displacements are so frequently found to occur. If such exist, they must be treated according to their requirements. If a pessary can be so applied as to keep the uterus in position, and can be borne without discomfort, it should be employed. But we must also set to work to excite the uterus to take on action, and allow absorption of its hypertrophic walls to ensue.

As I have stated, the cervix looks discoloured and distended, and this condition at once suggests relief by local depletion. Such treatment should not only relieve congestion of the vessels, but have the effect of setting up absorption of the organised products of inflammation. The late Sir James Simpson was the first to describe this disease. He did so, in 1852, in a paper entitled 'Morbid Deficiency and Morbid Excess in the Involution of the Uterus after Delivery.' He strongly recommends the application of eight or twelve leeches to the vaginal portion of the uterus, or to the anus or perineum. Of late years a much more convenient method is employed, that of puncturing the cervix by means of a lancet. Thus the amount of blood allowed to escape is under the control of the operator, and the process is far less fatiguing to the patient. In this way, from time to time, one or two ounces of blood may be extracted from the cervix. It will be well, too, in some cases, to apply counter-irritation to the lower abdomen, over the enlarged uterus; the hypogastrium may be painted once or twice a day with a strong solution of iodine till the skin be vesicated, or a series of small blisters may be employed. I am accustomed to deplete the cervix two or three times during the month, and, as often as opportunity offers, I pass into the uterus a strong solution of iodine soaked in cotton wool, by means of a Playfair's probe. I always follow this up by applying against the cervix a good-sized tampon of cotton wool saturated with glycerine. Glycerine is most useful as a depletory agent. Its great affinity for water is well known; it seems to extract from the congested vessels a large quantity of serum. Patients complain that their linen is kept soaked for a day or two after the application, the characteristic of the discharge being that it will not dry. I have proved lately in several cases in Martha Ward the rapidity with which the abraded cervix heals after the frequent application of these glycerine pledgets.

Sir James Y. Simpson recommends suppositories of the iodide of lead, also of bromide of potassium, and mercury. I have never seen any good effects from their employment.

Sponge-tents, inserted at short intervals, have been used, and Thomas says that they of themselves exert an alterative influence upon nutrition. I do not recommend their employment for such a purpose; they are always attended with risk, and I think their efficacy extremely doubtful.

I must not neglect to mention the heroic plan of treatment proposed and extensively practised by Dr. Atthill of Dublin. He advises one of two methods; either passing, by means of Simpson's porte-caustique, ten grains of solid nitrate of silver into the uterus, and there leaving it, or swabbing out the uterine cavity with fuming nitric acid. The way in which these plans are carried out is fully described in Dr. Atthill's valuable little work on diseases of women. It appears that after the application of the acid, it takes five or six weeks for the slough caused by it to separate.

Dr. Atthill says with regard to the treatment by nitrate of silver, that he has practised it freely for many years, and believes it to be both simple and safe. He admits that it may give rise to pelvic cellulitis, and that he should not be at any time surprised at its occurrence; but says that the fear of it would never deter him from carrying out the treatment, for he considers an attack of cellulitis of much less importance than the continuance of profuse menorrhagia. It will be well for the practitioner to weigh thoroughly these points in his mind before deciding upon adopting this method. The same risk applies to the application of fuming nitric acid to the cavity of the uterus; I have seen three cases of pelvic cellulitis following it, and one of the patients nearly died. I think, therefore, it requires an amount of courage for a general practitioner to undertake these heroic methods in his private practice. Death resulting from his treatment of a chronic uterine disorder might seriously damage his local reputation.

I do not wish to declaim against this plan of treatment, for I have seen admirable results from it. After one thorough application, the continued losses of blood have ceased, and menstruation has occurred with regularity, and without excess.

I have reserved till the last the medicinal treatment which appears most useful in these cases. The iodide and bromide of potassium given together seem to be of great service; the latter drug, however, is the one chiefly to be depended upon. It was first introduced into medicine by the late Dr. R. Williams for the purpose of causing absorption of the products of inflammation. Sir James Y. Simpson has written that it may be depended upon as an active stimulant to absorption, besides possessing, beyond all other remedies, the property of acting as a special sedative on the reproductive organs.

I frequently combine this drug with citrate of iron, hoping to obtain also the benefit to be derived from the tonic.

Rest in the recumbent posture and freedom from sexual intercourse are important points in the treatment of subinvolu-

Such must be enforced as much as possible. I believe
uccess with which the cases are treated in Hospital is in a
measure due to the thorough way in which these points
arried out.

November 11.

r. V. Harris showed three pathological specimens.

Liver, spleen, and kidneys. The liver was red and slightly
ular. The right lobe contained a large cheesy mass. The
n, kidney, and intestines were amyloid.

A very dilated heart, containing many large ante-mortem
in the right auricle and left ventricle. The aortic valves
much diseased.

An aneurysm of the descending part of the arch of the
, eroding the upper dorsal vertebræ, pressing upon the left
chus, left vagus, and the œsophagus.

r. Lyons read a paper on 'Diseases of the Jaw connected
the Teeth.'

this paper I have to treat of those affections of the jaws of
h the teeth are the immediate cause, and firstly of alveolar
ess. It is the result of an acute inflammation of the peri-
ntal membrane, which may arise from a blow on the jaw or
h, from cold or other source of irritation, but it is most com-
ly the sequence of an acute inflammation of the pulp of a
h. A patient complains of a dull heavy pain arising from a
ain tooth which is tender on pressure, after a time the pain
mes more acute and throbbing, pus is formed, and finds an
at the labial or buccal surface of the jaw, or at any point
rnal to the dental arch.

he fang of the tooth being contained in a bony cavity, in-
mation arising either in the pulp cavity or peri-odontal
brane, inflammatory exudation takes place around the fang,
in the cavity, going on to the formation of pus; the walls of
cavity become absorbed, and in one place or another per-
ted; the pus then escapes either through an opening in the
k, or below the lower jaw, but most commonly into the
th.

lveolar abscess is a trifling matter as a rule, but it has been
wn to end fatally, by causing extensive disease of surround-
structures, as in the case related by Mr. Salter. The com-
error with regard to alveolar abscess is that it may be
aken for diseased bone in those cases in which the orifice
rs on the surface of the face; the tooth, so far as the vitality
e pulp is concerned, is dead, and is the source of the irrita-

tion which keeps up the discharge, being therefore analogous to the sequestrum in necrosis.

Attention to the following points will lead to an accurate diagnosis.

In alveolar abscess there is less general swelling, except at first and in acute cases; there is an absence of that diffused induration of surrounding tissues which is present in necrosis; the canal leading to the abscess is single, usually short and direct; the characteristic fœtor of the discharge from dead bone is also wanting. The locality, in a doubtful case, being in the neighbourhood of the jaw, is in favour of the idea of a tooth being the cause, and an examination of the state of the teeth seldom fails to settle the question.

With regard to treatment there is a point of importance to be noticed. Poultices and fomentations should not be applied to the face, though at the commencement of the peri-odontitis and prior to the formation of the abscess they are grateful to the patient; but when pus has formed, they may have the effect of causing the abscess to point externally. For example, an abscess occurring at the base of an upper bicuspid tooth, the swelling is on the buccal surface; on a poultice being applied externally, pus would travel above the fold of mucous membrane, connecting the superior maxilla with the cheek, and appear among the buccal muscles, ultimately passing through the skin, thereby causing those scars so often seen on the faces of patients who have undergone this treatment. I would therefore recommend that all poultices be applied within the mouth, so that the abscess may point therein. The immediate extraction of the offending tooth or teeth effects the most rapid cure, as an exit is made for the pus and the source of irritation removed simultaneously; but it is not always desirable to extract the teeth. I have sometimes done so, and swabbed the sockets well with antiseptics, such as a strong solution of carbolic acid or of chloride of zinc (40 grains to 1 ounce), and then returned the teeth to their sockets with a fair amount of success.

Of the many cysts that occur in connection with the jaws, I have simply to deal with the so-called dentigerous cysts.

A cyst is a cavity containing fluid or pultaceous material which is separated from surrounding structures by a more or less distinct capsule; it may be a new formation or a pre-existing structure which has become distended by its own secretion, or by extravasation into it. Generally a dentigerous cyst forms in a pre-existing structure, the commonest exciting cause being an impacted tooth; for we find that when one of these cysts is formed, there is a tooth short of the normal number, geney it is the canine or first or second bicuspid, though it may any other, which tooth will be found in the cyst to which it given rise.

Why a tooth embedded in the jaw should cause these serous lections is not clearly understood. I have seen a number of lls wherein teeth were lying horizontally across the jaw, ased in a bony chamber, and which simply through their sition were unable to assume their places in the dental arch. lso know patients in whom the same thing is going on, witht the slightest symptoms of the formation of a cyst.

The symptoms of a dentigerous cyst are an enlargement of e jawbone in that part where the cyst is seated. An exaination of this enlargement shows it to be an expansion of e bone itself; and on pressure the characteristic eggshell or rchment like crackling is elicited, the absence of one or more th that have not been extracted confirming the diagnosis.

In my practice I have seen but three, and they were all in e upper jaw. In one the canine was missing, and in the hers the first bicuspid, which, when they were taken from eir respective cysts, were found imperfectly developed, the ngs being wanting.

We must bear in mind that even though all the permanent th be present, there may yet be a temporary one impacted.

Alveolar abscess not uncommonly becomes converted into a st, even after the extraction of the offending tooth.

I had a case of a little girl who had suffered repeatedly for a ng time from a recurrent alveolar abscess arising from the fang a lower bicuspid, in connection with which was a cyst exnding two inches on the left side of the jaw.

The term epulis is applied to a variety of growths springing om the alveolar process and gums. I confine the term to a rowth that is fibrous in structure springing from the alveolar rocess, usually from the little slip between two teeth, growing owly, involving the bone, periosteum, and more or less of the eri-odontal membrane. They are more common on the buccal an on the lingual surface of the jaw.

An epulis tumour seems to have a certain relation to the teeth whose neighbourhood it forms.

It always makes its appearance where there are teeth or fangs. t usually invades one in a very marked degree more than any ther near to which it may be situated, by dislocating and pushing out of place. It has nothing to do with caries of the teeth, and e removal of a certain tooth together with the excision of the mour is almost always accompanied by the immediate and omplete cure of the disease. Occasionally these tumours appear where teeth have been removed, and the gums seem edentulous; it will, however, generally be found in these instances that a fang of one of the teeth has been left behind, and is associated with the irritation that has caused the growth.

Complete extirpation and the extraction of the neighbouring teeth is the rule for the treatment of epulis.

The following case, however, shows that such a proceeding may be unnecessarily severe. A surgeon excised a large portion of the outer plate of the socket of a central incisor tooth, on which an epulis had grown, and though two years since, the tumour has not yet returned. But we ought to supplement the excision by painting the gums once a week for two months with undiluted carbolic acid.

With regard to that terrible form of necrosis arising from phosphorus poisoning, it is a recognised fact that it cannot occur in patients who have perfectly sound teeth, but only in those whose teeth are carious.

The subject of nervous affections arising from diseased teeth is important and interesting—important because of the remote parts that are sometimes affected by that which is generally an obscure cause, and interesting through the variety of maladies that not infrequently ensue. Mr. Salter divides these affections into those which are reflex, secondary, and remote; and those which are direct, immediate, and from contiguity. In the former category would rank epilepsy, neuralgia, and paralysis; in the latter, local pain, facial palsy, and some forms of amaurosis. The situation of the teeth, their abundant supply of nerves, and the great and diffused swelling which their diseases produce in contiguous structures, inevitably evolve much nervous disturbance and complication. The superior molars are but little removed from the tonsils and Eustachian tube, and their fangs are so close to the orbit and its all-important contents, that it will not be difficult to account for the nervous complications which are directly entailed by the spread of inflammation from the periosteum of diseased teeth. Of course the most common reflex nervous disturbance to which dental irritation gives rise is neuralgic pains in the head, and this especially where the upper teeth are implicated. In the supra and infra orbital nerves, the globe of the eye, the temple—in these regions dental neuralgia is very common. The several branches of the fifth pair appear to be the most susceptible of reflex action, caused by the dental irritation of one of them; and next, the branches of the cervical and brachial plexuses: hence pains of the neck and shoulders, bend of the elbow, and with them occasionally loss of motor powers, are common. Reflex nervous irritation dependent on nervous isease in teeth is uncertain in its manifestation. As regards he teeth which excite nervous irritability, nearly all their iseases appear capable of causing this condition—caries with or ithout exposure of the pulp, exostosis, nodular development of entine in the pulp cavity, peri-odontitis, impaction of permanent eeth in the maxillary bone, and crowding of teeth from inufficient space.

By way of illustration, I relate a few cases taken from ublished accounts and my own practice.

In 1874 a woman applied to Mr. Salter for relief on account f severe neuralgic pains connected with one of the central ncisors of the upper jaw. At times the pain was simply conined to the region of the tooth, but on sudden pressure or change f temperature it flew all over the face. The tooth was to all xternal appearances perfectly healthy. On its extraction Mr. Salter made a vertical section, and found an oval pearl-like xcrescence of dentine growing from the side of the pulp cavity, so as to encroach much upon it, and occupying for a short space more than half its diameter, which by pressing on the pulp gave rise to the neuralgia.

A patient of Mr. Bell's had suffered from neuralgia for many years. The attacks appeared associated with certain teeth from which the pain seemed to emanate. At first the neuralgia was confined to the branches of the fifth pair, but as it increased in intensity, it spread to the arms, legs, and indeed to the whole body. The teeth appeared quite sound, but always gave pain on being slightly struck. Mr. Bell extracted those teeth which appeared most involved, and this was followed by complete cessation of pain, but only of temporary duration. The fangs of the teeth were each discovered to be encrusted with small nodules of exostosis. It was found necessary from time to time to extract some teeth, and this was done until all were gone, and then only was the patient entirely free from neuralgia. The narrator of this case seems to think that nodular exostosis is rarely the cause of neuralgia. I believe it is not uncommon. In 1869 a gentleman came to me and complained of severe neuralgia on the right side of his face. On examining the jaw and percussing the teeth, I found the right upper bicuspid sensitive, and after trying various constitutional remedies for the relief of the pain without success, I extracted the tooth, and on examination I found a nodule of exostosis at the extremity of the fang, which I pared, and returned the tooth to its socket, and since then this patient has never been the subject of neuralgia.

A nodule of exostosis is hypertrophy of the cementum, and may range from the size of a pin's head to a small pea.

Chronic trismus is an affection which arises from impaction of wisdom teeth. There is hardly a month passes without a case being seen in the Dental Department of this Hospital. It occurs through the difficult eruption of the wisdom teeth owing to want of space. It is not an uncommon operation to extract the second lower molar to make space, and the trismus invariably ceases.

Mr. Hancock published a case where wry neck had been caused by carious teeth. A young woman was brought to Charing Cross Hospital with her head drawn down nearly to the left shoulder, medical treatment having been tried and failed. No disease could be detected in the spine, but on looking into the mouth, a stump and a partially-decayed tooth were seen in the lower jaw; the teeth were extracted, and she was well in a few days.

Dr. Ramskill records a case of epilepsy arising from a carious tooth. It was published in the 'Medical Times and Gazette' in 1862. A boy, aged 13, had frequent attacks of epilepsy for eighteen months. Latterly it was noticed that the boy for some days would rub his left cheek and complain of face-ache, and then a fit would follow. Upon examination of the mouth, a carious molar was discovered on that side, and extracted. During the following four months no recurrence of fits took place.

Mr. Hancock relates a case of amaurosis arising from crowded teeth. It occurred in a little boy aged 11 years. A month before he saw him, the boy awoke one morning and found himself perfectly blind. Before that he had nothing the matter with his eyes, and when he went to bed on the preceding night he could see distinctly. Deriving no benefit from the treatment of the country practitioner, he was sent to the Hospital. His pupils were dilated, fixed, and uninfluenced by light, which he could not distinguish from darkness. The suddenness of the attack, combined with other symptoms, led Mr. Hancock to conclude that the mischief was functional rather than structural, and he examined the teeth, and found that they were much crowded and wedged together. Accordingly four teeth were extracted. The same evening the boy could distinguish light from darkness, and the following morning could distinguish objects; and within a fortnight he was dismissed entirely cured.

I had a patient who, according to his own account, suffered from neuralgia for three years. During the last seven months the pain had been so excruciating that existence was almost unbearable. On examining the mouth, there was seen to be an opening in the upper jaw, opposite to the spot where the left central incisor formerly was placed, and out of this pus was oozing. On passing a pair of ordinary dressing forceps, something was felt, and withdrawing them, the dead fangs of a bicuspid tooth fell out. Within two days after the extraction, the neuralgia had entirely disappeared. This case had been mistaken for necrosis, and so treated for two years.

I could cite cases of paralysis, wry neck, deafness, ulceration of the neck, and facial palsy, arising from affections of the teeth, but believe the above cases will be sufficient to illustrate the value of the study of the nervous diseases of the teeth, and thus may tend to throw some light on the sometimes obscure origin of diseases about the region of the neck and face.

November 18.

Dr. Moore showed two specimens.

1. An aorta showing an abnormal origin of one of the coronary arteries.
2. An amyloid kidney with a gummy tumour in it.

Dr. Moore read a paper on 'Bronchitis.'

The term bronchitis is scarcely met with in the authors of the last century. Sydenham has described one variety under the title of peripneumonia notha; Laennec describes all varieties under the heading of pulmonary catarrh. While adhering to the term bronchitis, I wish to lay down as a first principle that it is a general, a constitutional affection. It has many varieties, and in most of these a cough bringing up sputa is the prominent symptom.

Cough is only absent where the patient is very young. The respiratory muscles are not sufficiently under their control to enable them to eject the morbid secretion of the mucous membrane, and they are apt to die, not of the disease as a whole, but of the mechanical results of this particular part of it.

Most of the cases of bronchitis I have seen may be grouped under one of the following heads: (1) Peripneumonia notha; (2) Cough of rickets; (3) Acute bronchitis of young people; (4) Winter cough; (5) Bronchitis with hæmorrhage; (6) Bronchitis with fibrinous sputa.

Bronchitis with fibrinous sputa is a rare disorder. The cough is always chronic, and perhaps for this reason the characteristic sputum is rarely seen in our wards. They sometimes occur as small fragments, but more often as branched masses in shape like a leafless tree. Their shape led Tulpius to describe them as coughed-up pieces of branches of the pulmonary vessels. As he is probably the first author who mentions this sputum, it is worth while to give one of Tulpius' cases.

'*Whole veins cast up from the lung.*—A captain of Amsterdam, who had long lived at sea, when well on in life contracted after repeated colds a cough which was worse on land than at sea. This cough wearied his lungs for more than two years. He did not cough up blood, but two large branches of veins, which, when spread out, covered as great a length as an extended hand. They were altogether free from any of the parenchyma of the lung, and showed distinctly the features of their ends, just as if they had been dissected out by a careful anatomist—a clear proof this that the whole lung was destroyed. No wonder, therefore, that he died shortly after. His physicians were much astonished that there could be so great a breaking down of the parenchyma without any previous appearance of pus.'

This variety is rare in our wards, and is not common among the out-patients. In two cases I have seen the cough had lasted for more than a year, and in both there were hard fits of violent coughing. The patients presented no symptoms characteristic of this form of disease.

Bronchitis with hæmorrhage is often met with among the butchers of Smithfield. When young, the butcher suffers from the most violent forms of pneumonia, of pleurisy, and of bronchitis; when old, or rather when in middle life, from chronic Bright's disease and its accidents, and from the lowest and most hopeless forms of pneumonia and bronchitis. The bronchitis which this kind of man has when young is seldom seen in other people. Traces of blood occur now and then in the sputa of chronic bronchitis, but this is not the hæmoptysis to which I allude. It resembles that which precedes phthisis. It is a copious sudden discharge of blood. It has been preceded by a violent cough, and this cough, usually somewhat diminished in severity, remains after the hæmoptysis. The treatment consists in keeping the patient quiet in bed, in a low diet, and in free purging. In a few cases where nature has not relieved the circulation sufficiently, it hastens recovery to bleed from the arm. The most important point, however, about this disease is its differential diagnosis. Such hæmoptysis in a young man is in most cases justly regarded as a certain indication of the commencement of phthisis. The full-blooded condition of the butcher, the absence of wasting, of night-sweats, of any signs of debility, of the physical signs,—these are weighty arguments against phthisis. I believe that the shape of the chest has hardly been sufficiently insisted on as a point to be observed. If a patient has a chest the outline of which shows the normal proportion of antero-posterior and transverse diameter—that is, the proportion 1 : 1⅓—and if the outline has no marked irregularity at any point, it is likely that the true diagnosis of his case is bronchitis with hæmorrhage. On the other hand, if the patient's chest have the proportion 1 to 1½, if his scapulæ stand out from it like wings, if it is unduly flattened or unduly rounded here or there, I believe that his disease is most likely to be phthisis.

The acute bronchitis of young adults is characterised by a violent cough, but if there be any trace of blood in the sputa, it can usually be found to come from the fauces. This is a febrile disorder, of which the first local manifestation is usually laryngitis, causing hoarseness. The laryngeal affection passes off, but the cough continues. The sputa are often scanty, and consist of tough viscid mucus. Young people with mitral disease, however slight, are especially liable to this form of bronchitis. If there be considerable mitral obstruction, the disease assumes a grave aspect, and this is the only case in which this bronchitis gives rise to dyspnœa. The sputa are then very abundant and watery.

The treatment of this bronchitis, when uncomplicated with heart disease, should be expectorant. It is in this kind that squill, senega, and serpentary are most useful. A purgative should always be given. The diet of the patient need not be restricted, but all stimulant, except perhaps claret-and-water, should be cut off for the time. The rule of not going out after twilight must be strictly enforced.

A winter cough begins to affect many people about the age of forty. This is the form of bronchitis which leads to emphysema. The cough comes on in violent fits, which are sometimes to a slight degree under the control of the patient. If children in the house happen to have whooping-cough, the adult's cough sometimes takes the whooping character; but in the adult there is rarely vomiting. The coughing is often worst at night. This is no doubt sometimes due to the fact that many bedrooms grow intensely cold as the night goes on, which very often results in a sudden awaking about 2 A.M. with cold ears and a suffocating sensation in the chest. The patient has one fit of coughing, and then another, and only dozes off to sleep when the morning sun has given a little warmth to his room.

Blood is now and then seen in the sputa. It comes from the bronchi or the larynx. Small ecchymoses are sometimes to be seen there post-mortem.

Every subject of winter cough must have his special regulations, but the main points in all are to stay in doors in bad weather, to wear non-conducting materials, to eat and drink moderately.

Children in arms are often brought to you with a severe cough. Examine their ribs and their wrists, and you will often find signs of rickets. On questioning the mother, you find the cause of the disease over-suckling or too early feeding. There are too few teeth, and the fontanelles are too widely open. The child has perhaps had repeated coughs. When you have satisfied yourself that the case is one of rickets, give no cough mixture. Regulate the diet and treat the rickets. Give cod-liver oil, or where this is unsuitable, bark or iron, and the cough rapidly gets well. Infants not rickety may have coughs, and these are usually due to chills received in washing.

When an infant, rickety or otherwise, is in a state of collapse owing to impending suffocation from sputa which are not coughed up, it must at once be made to vomit, and mechanical means are often the quickest. The vomiting will relieve it a little. It may then be given half a grain of Am. Carb. dissolved in water, the dose to be repeated in a few minutes. Sometimes this will not be at hand, then brandy may be given, but three drops should be the limit.

Peripneumonia notha is a subacute form of bronchitis. It has two symptoms besides the cough—frontal headache and constipation. Sydenham has described it with his usual truth, and whoever follows his directions as to the treatment will succeed. He gave low diet and purgatives, and cut off all stimulant. I think I have observed that middle-aged people whose constipation is due to a partial hernia often begin with dyspeptic symptoms, and go on to a cough, with slight rise of temperature and headache—in short, to peripneumonia notha. Pain in the side is common in this as in all kinds of bronchitis. It is probably external and muscular, and not pleuritic. I have seen a case in which it was so severe as to draw off attention from the pulmonary symptoms, and to lead the physician to talk of diseases of the liver.

In these rough notes on bronchitis I have raised objections to the use of stimulants. I wish this to apply to all the forms I have mentioned, for I am of opinion that the avoidance of alcoholic stimulant is the main point which distinguishes the right way from the wrong in the treatment of bronchitis. A short time ago I saw a lady apparently dying of bronchitis. Her face was flushed and approaching duskiness, her skin hot, her pulse 124; she was about 60 years of age, and of a feeble constitution. On inquiry I found that she had port, champagne, and brandy every day in large quantities. These stimulants had fanned a slight flame into a fire. They were reduced in quantity and her fever declined, and she recovered her usual health.

Bronchitis is so well-worn a subject that some apology is perhaps needed for a paper on it. The author of the 'Lily of Medicine' says, 'Quia igitur memoria hominis labilis est, quod communiter de practica dicitur, repetere humilibus non erubesco quoniam secundum Gal. vii. de ingenio, nullus potest Deo melius approximare quam studendo in veritate et pro veritate.'

November 25.

Mr. Bradshaw read the notes of a case of varicose veins in the leg treated by means of eschars produced by Vienna paste. The case terminated favourably.

Mr. Macready read the notes of two cases of 'nervous disorders following concussion by a railway accident.'

In the first case the patient, who was seen soon after the accident, had continuous trembling, which lasted for several days, without any other very definite symptoms.

The second case was that of a man, aged 22 years, who had received a blow across his loins, and was admitted in a state of concussion. The patient also had general hyperæsthesia, and in addition several fits daily of an hysterical nature, which could be produced by touching his head or his spinal column.

Mr. Hames read the notes of a case of death following an injury to the abdomen in a boy aged 8 years. The patient had his abdomen struck and compressed by the handle of a barrow: this was followed by constant sickness and the general symptoms of shock. The temperature and pulse rose gradually in a definite ratio (the temperature from 97° to 103°) within twenty-four hours. The patient then suddenly died. The only change found post mortem was a slight sub-peritoneal ecchymosis near the head of the pancreas.

December 2.

Dr. Herbert Taylor read the notes of a case of dislocation of the wrist.

Boy, aged 14 *years.*—On November 15, 1875, in the afternoon, while practising on a vertical pole in a gymnasium, he suddenly felt faint, loosed his hold, and fell to the ground; when he was picked up, it was found that he had sustained some injury to his left wrist. I saw him within ten minutes of the accident.

The appearance of the left forearm and hand may be described as follows:—

At the level of what appeared to be the lower end of the radius and ulna on the dorsal aspect was a rounded swelling with which the carpus, metacarpus, and phalanges were directly continuous; this swelling extended across from radius to ulna, and did not appear to be confined to either bone. On the palmar aspect, on a plane lower than that of the dorsal prominence, was another elevation directly continuous above with the shafts of the radius and ulna; and owing to the occurrence being so recent, there was but slight effusion, and I have no doubt that the inferior termination of the palmar swelling was formed by the articular surface of the radius and the triangular fibro-cartilage on the ulna. There was but very slight pain on manipulating these surfaces, and the sensation to the fingers through the skin was the same as that associated with the touch of the upper articulating surfaces of the human wrist-joint.

Thus the carpus appeared to be on a higher plane than the radius and ulna.

The hand was not deflected towards the radius nor ulna, but lay in one axis with those bones. There was no lesion of the skin. The length from the point of the olecranon to the tip of the styloid process of the ulna was the same in each arm, namely, 8⅝ inches. The length from the point of the olecranon to the proximal end of proximal phalanx of little finger was 11 inches in the right arm, 10½ in the left, so that there was shortening to the extent of ½ inch between the styloid process and the phalanx. There was but very slight impairment of pronation and supination; no crepitus obtained in ulna or radius either before or after reduction. Very little pain in manipulation either at the seat of injury or higher up the forearm.

The continuity of the styloid process of the ulna, and the articular surface of the radius, with their respective bones, seemed complete.

Treatment consisted in reduction by bending the carpus backwards and then extending. When reduced, the lengths of the two arms were identical, and the deformity did not recur on removing the extending force.

One long external splint; shorter palmar pads over the positions of swelling; bandage and sling.

November 19.—Removed and readjusted splints, allowing the fingers free movement; very little pain or swelling.

November 26.—Readjusted splints; free movement of fingers and thumb.

December 2.

Taking into consideration all the above points, I came to the conclusion that this was not a case of fracture of the forearm, but of dislocation of the carpus backwards and upwards on the bones of the forearm.

This injury has always been considered of very rare occurrence, and some authorities, among them Dupuytren, maintain that such an accident as simple dislocation of the wrist without fracture of one of the bones cannot occur, and that all those cases that have been thus designated, have been found on closer examination or on dissection to be complicated with fracture, or even to be fracture without dislocation.

Many surgeons, however, in their written works, though admitting the rarity, allow the possibility of the accident.

Its rarity, as we may suppose, is not due to the freedom of that part of the human frame from external violence; for it is one of those most exposed to danger, the lower end of the radius being, next to the clavicle, the most frequent seat of fracture, and, as we know, injuries to the forearm and hand form a large item of the entries in the surgery-book.

In the month of April 1875 there were entered—

30 sprained wrists.
15 Colles' fracture.
2 fractures of both bones at wrist.
1 greenstick fracture of ulna.

The cause of the rarity of dislocation is due to the comparative weakness of the structure of the radius at the point where the shaft expands into the cancellous tissue of the epiphysis; hence in falls on the hand, if anything more violent than to produce a sprain, the force is transmitted from the carpus through the wrist to this weak spot, and the more frequent result, as we have seen, is a Colles' fracture. The injury my patient sustained was rupture of the posterior ligament, and probably anterior fibres of the internal and external lateral ligaments, with stretching of all the parts: whilst in sprains there is uniform swelling not coming on at once or in so short time; absence of any characteristic deformity; no shortening.

The injuries with which this form of dislocation may be confounded are—

1. Fracture of both bones above the wrist.
2. Separation of the epiphyses.
3. Colles' fracture.
4. Sprains.

1. From the first it is to be distinguished by—

(1.) The continuity of the articular surfaces and styloid processes with the shafts of their respective bones.

(2.) A comparison of the length of the bones of the forearm on the sound and on the injured limb.

(3.) The absence of crepitus on moving together the supposed fractured ends.

(4.) The less pain in dislocation.

(5.) Comparison of length of carpus on sound hand with that of the displaced carpus. In dislocation, they will be identical; in fracture, on the injured side the length will be greater by about ½ to 1 inch or more.

2. The above reasons will also distinguish it from separation of the epiphyses with displacement backwards.

3. In this injury Colles' —

1. The dorsal prominence is more confined to the radial side of the forearm, and immediately beneath this on the palmar aspect is a hollow indicating the absence of the lower end of the radius, while the palmar prominence formed by the pronation of the upper fragment of the radius is higher up the arm than in dislocation.

2. The hand lies at an angle with the forearm, in consequence of its following the displacement of the lower piece of the radius upwards and outwards.

3. Again, if reduction be effected, whether easily or with difficulty, crepitus will be obtained, and on remission of the extending force the deformity will recur; whereas in recent dislocation the reduction is easy, there is no crepitus, and the deformity does not recur.

Dr. Wharry read a paper on 'The Part taken by the Alimentary Canal in the Conservation of Health.'

I propose to call the attention of the Society to the consideration of one of the functions of the alimentary canal—viz., to its 'compensative action in maintaining and restoring the balance of health.' As illustrating the performance of this function, I may cite the following case:—

'A patient ate mushrooms for supper, headache soon supervened, with vomiting, a restless night, a sharp attack of diarrhœa, and in forty-eight hours the symptoms had subsided.'

Here we have the stomach ejecting its injurious contents; the intestines, by increased vigour of the peristaltic action, hastening these injurious contents onward; the intestinal flux washing the poison out from any nooks in which it may have lodged. But though we may reasonably infer it, we cannot prove that the poisonous matter absorbed into the blood has been eliminated by the intestines.

If we turn to the experiment of Feltz and Ritter, we shall see that poisonous matter in the blood may be and is eliminated by both the stomach and intestines.

M.M. Feltz and Ritter injected fresh ox-bile into the veins of dogs. When large quantities were injected, bilious diarrhœa set in, with vomiting first of food, then of bile and blood; other serious symptoms were developed, but the animal usually recovered.

The vomiting that is so troublesome after the inhalation of chloroform is a familiar example of elimination from the blood and ejection by the stomach of an injurious substance.

After parturition, when the mother loses a large quantity of blood, after operations during which there has been much hæmorrhage, and during convalescence from acute disease, the bowels are almost always confined for several days. Here we have the alimentary canal husbanding the resources of the system, allowing nature to make up the lost ground under the most advantageous circumstances. This is another example of compensative action on the part of the intestines.

In cirrhosis of the liver, and under all circumstances giving rise to obstruction of the portal circulation, we have the compensative function of the intestines again at work. The engorged veins and the distended spleen are relieved by fluxes and hæmorrhages into the bowel; and in some cases an exact relation exists between the hæmorrhages and the enlargement of the spleen, so that the physician can prognosticate a hæmorrhage from the size of that organ. When, under these conditions, a hæmorrhage takes place into the stomach, the blood is ejected by vomiting.

There is one more variety in the form of this compensative action exhibited in those cases where women have menstruated vicariously by means of hæmorrhages from the stomach. Such cases I regard as typically compensative in maintaining the balance of health. Here we have a natural function suspended, which in the usual course of events would seriously impair the health, but instead of this we have developed an anomalous periodical hæmorrhage from the stomach, and the healthy standard is maintained.

To return to the consideration of vomiting as a conservative effort of nature.

In our text-books on toxicology, we have hardly a poison there tabulated which does not number 'vomiting' amongst its symptoms, and the more speedy the vomiting the greater is the chance of the patient recovering from the effects of the poison.

These poisons not only produce vomiting when introduced into the stomach, but when introduced directly into the blood, even if we divide the pneumogastric nerves. D'Ornellas, who has been experimenting in this direction recently, gives us the following results.

Emetine, when introduced into the blood of a dog, produces vomiting, and the rejected matters produce vomiting in pigeons. After division of the pneumogastric nerves these results likewise occur, the vomiting being retarded and less efficient. If the dog is killed directly vomiting sets in, emetine may be detected in the stomach. These experiments prove beyond a doubt that the stomach is capable of eliminating poisons from the blood, and they also demonstrate the truth of Claude Bernard's statement, that the sympathetic nerve supplying the stomach is capable of taking on the action of the pneumogastric when that is deficient, thus furnishing an example of another kind of compensative action.

The vomiting early in smallpox, measles, and scarlatina is an ineffectual attempt to eliminate the poison.

The natural assimilative function of the alimentary canal is imperfectly adjusted to the wants of the organism. Some believe that it habitually assimilates more than is necessary for the sustenance of the body, and that the surplus is got rid of by the kidneys as urea. Others consider that in order to secure the assimilation of sufficient nutritive material, a large excess of food must be taken. Now, with regard to the supposed excretion of surplus food as urea, the following facts, which I have myself observed, incline me to look upon it as unproved, and that urea is derived solely from the retrograde metamorphosis of the tissues: 1. A man fed solely on a reduced quantity of non-nitrogenous food excretes almost, if not quite, as much urea as when upon ordinary diet. 2. A man fed upon a diet of ten ounces of solids and ten ounces of fluid, excretes a very large quantity of urea in proportion to the nitrogen in his food.

Assuming the digestive process to be imperfect, this imperfection is a result of the existence of its power of elimination, and the more the eliminative power is exercised, the less perfect is the performance of digestion. This proposition is borne out by the fact, which I have noticed in the recent epidemic of typhoid fever, that those patients that have suffered most from diarrhœa have suffered most from imperfect digestion.

The diarrhœa of typhoid fever is nature's attempt to throw off the poison by the alimentary canal. It is tolerably certain that typhoid fever is caused by the passage into the intestines of the miasm suspended in fluid; it is also probable that the glandular affection of the intestines and mesentery is the direct effect of the action of the germs absorbed by them. This does not account for the typhoid stools,—the fluid of the stool is the flux that occurs when the intestine is excreting a poison; the solid particles in the stool are the food which the bowels (fully occupied in eliminating) refuse to digest.

In the surgical wards we sometimes see granulating wounds, which, after progressing favourably for some time, will one day have changed their aspect, having an 'angry' look about them;

nd upon inquiry the patient is found to have some diarrhœa.
'his condition arises from slight septic absorption, and the sys-
m throws off the poison by means of the diarrhœa.

The importance of recognising the compensative function of
e alimentary canal is manifest when we come to deal with
sease clinically. If a poison is taken into the stomach and
miting ensues, it is our obvious duty to ensure the efficiency
the vomiting. If an irritating substance gets into the ali-
entary canal, fluid is poured out, and the peristaltic action
comes vigorous; we must give medicine calculated to increase
th the flux and muscular action. If there is constipation after
y severe hæmorrhage, we must leave it to itself, and avoid
rgatives. In acute Bright's disease the kidneys do not perform
eir work properly, and there is an accumulation of nitrogenous
atter in the blood, the patient begins to show signs of uræmia,
miting and diarrhœa set in, and the uræmic symptoms disap-
ar. To have arrested the diarrhœa and vomiting would have
en to paralyse nature's compensative efforts. This extraordi-
ry function of the alimentary canal must be educated, and yet
t to excess, for in proportion as this function develops the
similative function will fail. Compensative vomiting occurs
many cases of cardiac disease, after a meal. The heart's
tion being seriously disturbed by the pressure of the food in
e stomach, reflex vomiting occurs, the food is ejected, and the
eart is relieved.

In advanced fatty degeneration of the heart, we find vomiting
nd marked dyspepsia. After food is taken into the stomach it
absorbed directly and indirectly into the blood; this raises the
tra-vascular pressure, more resistance is offered to the contrac-
ion of the fatty ventricle, and the heart becomes distressed.
y reflex action the absorption in the alimentary canal is arrested
nd vomiting of the unabsorbed food takes place. In those
rms of heart disease in which there is stagnation of the blood
n the large veins of the abdomen, diarrhœa sets in, and the
irculation is relieved to a certain extent.

In patients that suffer from habitual constipation, diarrhœa is
pt to occur; an attempt is thus made to relieve the loaded
owels by a flux. Not till thorough evacuation of the bowels
as occurred must the flux be controlled.

December 9.

Dr. Vincent Harris read a paper on the 'Etiology of Anæmia.'
Jsing the term anæmia in the same sense as it was first used by
ndral, it is defined as a special morbid state, in which there is

a relative diminution of the mass of blood, the general composition differing from the normal standard; or in other words, a state in which the mass of blood is diminished, the liquor sanguinis is watery, poor in albumen, and contains an excess of salt, and the red blood corpuscles are deficient. As regards classification, anæmia may be roughly divided into three sets of cases:—

1. Those in which the blood is diminished in quantity and deteriorated in quality by direct losses, such as hæmorrhages; or by indirect losses, such as fluxes.

2. Those cases in which the quality of the blood is deteriorated from mal-nutrition, and depending upon discoverable organic lesions.

3. Those cases in which the same change is brought about from apparent mal-nutrition, with no coarse lesion to account for it.

Under Class 1 are included *acute anæmia* from traumatic causes, as surgical operations, venæsection, detachment of the placenta, from blows, injuries, and the like, and more chronic cases from congestions, inflammations, ulcerations, and diseases of the blood. The most frequent cases of anæmia are from gastric hæmorrhage, due very often to gastric ulcer or cancer; hæmorrhage from the uterus, a normal function carried too far; and hæmorrhage from piles—the last being not infrequently an important constituent in the cachexia observed in cirrhosis of the liver. Next with regard to fluxes. One of the chief is the *drain of albumen* from the blood in chronic renal disease, producing, at all events in part, the well known 'pasty and waxy' look which the patients with this disease invariably have. Another important flux is *excessive lactation in the strong and ordinary lactation in the weak,* which acts by abstracting from the blood the allied albuminous substance, casein. Dr. Barnes says that this is most likely to occur in the working classes, where deficient food, bad hygiene, and hard work combine to produce a very thin, worn and pallid condition, and to cause, in addition to uterine troubles, such as sub-involution, vertigo, syncope, and dimness of sight.

Prolonged suppuration and purulent discharge, as in abscess, empyema, purulent peritonitis, chronic eczema, leucorrhœa, and gonorrhœa, cause anæmia in this way. Sometimes anæmia from gonorrhœa is extreme. Dr. Regal reported a case of excessive anæmia in a girl aged 23, who had suffered from gonorrhœa for five years. It may be well to mention in passing that some observers trace the anæmia in these last cases not to the purulent

ge, but to the strong balsamic remedies used in their
nt. Bronchorrhœa is said to cause anæmia.

rhœa is the most important flux, and soon produces
mic state, whether it is the diarrhœa caused by simple
n or organic disease.

eference to the second division of the subject, affections
spleen are perhaps most liable to be complicated
næmia. In many of the enlargements of this organ
s an increase of white blood-corpuscles; but in 'hy-
hy of the spleen' a condition is produced, called by
er and others 'cachexia splenica,' which is a true anæmia.
l fevers, remittent and intermittent, thus indirectly pro-
he condition. Mr. Dickenson, of the Bengal Medical
, describes such an anæmia as a sequela of one of the
alignant malarial fevers of India, called 'Bhootan.' He
an account of the affection, 'the emaciation and peculiar
ke colour of the skin were so remarkable, that among a
of invalids you could at once, without hesitation, pick out
erfect certainty the "Bhootan-wallahs," as they were
by the other soldiers.' That some anæmias occurring in
l districts are not always due to enlargement of the
several French physicians record a series of cases of
l anæmia occurring in Cayenne in 1867–68. In these
ate, that the morbid state was due to the presence of a
e found everywhere in the mucous membranes, except in
the large intestines.

ases of the stomach and intestines appear to cause
a when from any cause dyspepsia arises, but simple gas-
may produce the same effect. Affections of the lungs
ally phthisis), liver, kidneys, uterus, peritoneum, and
parts may give rise to anæmia, if severe or long con-

third division of the subject includes the cases of so-
idiopathic anæmia. It may be subdivided into—

t, what are called diseased states of the blood; and second,
of the vascular system and nerves. In the first are
as due to impure air, such as of coal-mines, bad hygiene,
ion, and acute fevers; the syphilitic, carcinomatous,
tic, purpuric, and scrofulous states; chronic poisoning
d, mercury, antimony, bicarbonate of potash, and other
nces. These are not all true cases of anæmia, because,
gh they are accompanied by pallor, &c., the blood also
ns, we are bound to believe, some foreign substances.

second subdivision consists of the cases of idiopathic
ia, that is to say, cases of anæmia in which all the above-

mentioned causes have been excluded, and where, after death, no coarse lesion has been found in any organ. Some cases called idiopathic during life have been proved after death to have been due to some lesion undiagnosed. Peukert reported a case of this kind, which was explained, on autopsy, by the discovery of a cancerous ulcer of pylorus; and others, at first obscure, later on show symptoms and signs of well-marked disease.

Dr. Addison prefaced his work on the supra-renal capsules with some remarks on 'a very remarkable form of general anæmia occurring without any discoverable cause whatever,' in which, after death, nothing was found but some fatty degeneration of the heart, semilunar ganglion, and solar plexus. This was the first instance, we believe, of such a disease having been noticed. Since Dr. Addison's time, many cases of what he called 'idiopathic anæmia' have been recorded.

Lately Corazza (in 1868) reported a case in a girl, aged 24, in whom nothing was found after death to explain her extreme anæmia.

Dr. Gairdner, too, relates a good case of like kind in his clinical medicine, and adds, 'that with regard to this most mysterious form of disease, it has no real relation to chlorosis of young women. It occurs in men, and often during middle age. The colour of the skin is essentially different from that of chlorosis, having, in fact, a tendency to sallowness. The general appearance is much more that of malignant disease than of any other condition with which I am familiar.'

Gasserow published five cases in 1871 of the same kind.

Biezmer stated that he had met with fifteen cases in five years in which anæmia occurred without any discoverable cause but fatty change in the papillary muscles, and of the small vessels of different organs, and less frequently extreme fatty degeneration of the heart.

We have ourselves seen three cases during a period of about two years. The result was sufficient to justify the diagnosis of pernicious or idiopathic anæmia.

There are a few, but very few, cases of fatal anæmia in which no changes, not even fatty degeneration, have been found on autopsy. These may be put down in some way to nervous causes. They are usually somewhat sudden, and occur from, as it were, continued shock.

The fatty changes which have been found in these obscure cases are said by some to be the effect, and not the cause, of the abnormal circulation. Fatty change resulting from an imperfect nutrition of the organs.

It is not unlikely, therefore, that the first pathological lesion one in the sympathetic system, especially as Dr. Addison's se showed fatty change in the solar plexus and semilunar nglia.

The anæmia which appears in Graves' or Basedow's disease, affection which is now almost universally acknowledged to be rvous in its origin, shows that anæmia can be a nervous nptom, and the symptoms usually noticed early in cases of al anæmia, such as palpitation, restlessness, and languor, int also to the nervous system as the first part of the body ected.

In support of this theory may be also adduced, that the rting-point is sometimes to all appearance mental; a great ef, as in Dr. Gairdner's case, or a sudden shock. And again, it in sudden fatal cases, those of so-called nervous phthisis, fatty changes have been discovered.

Mr. Bruce Clarke read the notes of a case of 'Intra-thoracic mour.'

December 16.

Mr. Bruce Clarke read a paper on 'The Spread of Cholera.'

Though it was not until 1831 that cholera appeared in Europe, it seems to be certain that it had been known in India some enty years before that date; whilst if we accept the statements some, it existed there in a modified form for a much longer riod.

It is only since 1831, however, that we have begun to know ything of its natural history. Various views have been held to its nature.

The first fact observed about its spread was that it attacked e great lines of traffic; hence it was assumed to be contagious, onclusion since shown to be erroneous. Since the attack of 48 it has been shown by Pettenkofer and others that three tors—place, time, and individual—are necessary for its propa-tion; hence it is usual to speak of the local, temporal, and dividual disposition.

Shortly after this attack, it became evident, when the march cholera was accurately mapped out, that whilst it was un-ubtedly true that the places attacked were ranged along the eat traffic lines, still other factors came into play, for whilst aris and Marseilles were almost decimated, Lyons remained ee. But further than this, one part of a town suffered more an another. Munich, Flaidhausen, and Berg were good amples of this. In these places it was almost universally found that the houses attacked were situated on the limestone gravel, whilst the overlying brick-clay afforded an almost perfect immunity from the disease.

The rationale of this fact is not far to seek. Moist soils which are not saturated with water contain a considerable amount of air, which is hourly drawn into our houses whenever they are warmer than the external air. In a clay soil, however, there is but little of this ground air, and hence the comparative immunity which it affords.

A soil which has been recently wet and then suddenly deprived of its interstitial water is in a far more favourable condition for the spread of cholera, owing, it is believed to the passage of the air over the moist earth.

The time of year most favourable for an epidemic appears to be the end of summer and beginning of autumn: of this fact there seems no doubt. Besides this, it must be obvious that some individuals are more prone to catch the disease than others; it may pass all through a house, and yet exercise apparently the most capricious selection.

In England, though these conclusions have in the main been accepted, yet the local variations appear to be hardly as clearly recognisable as in Germany.

But if the conditions accessory to the spread of cholera are well made out, it is far otherwise with the active agency by which this disease is circulated; that it is very readily conveyed by the fœces, however, is very certain.

Various ideas have been put forward on this subject. The cholera germ has been supposed to be fungoid; it has been alleged to be a bacterium; but so far all to no purpose. Lately, however, the experiments of Drs. Lewis and Cunningham in India have shown that a temperature of 100° C., even if kept up for some considerable period, does not destroy the vitality of the poison, thus negativing the idea that it was due to a low form of animal or vegetable life. On the contrary, it would appear that it should be placed rather in the same category with snake-poisons, and that it is more nearly allied to the alkaloids.

The only practical conclusions that can be drawn from such a study of this disease are (1) the necessity for cutting off from our houses the supply of ground air, and (2) the liberal use of disinfectants.

January 13.

Dr. Moore showed some pathological specimens.

1. A small urinary calculus passed *per urethram* after the use of diuretics.

2. Part of the left middle cerebral lobe, showing an abscess with a well-defined wall, associated with general basal meningitis, and with necrosis of the petrous portion of the temporal bone.

3. A drawing representing the face of a child with congenital syphilis, showing a peculiar form of disease of the nose.

Dr. V. Harris showed a specimen of an intra-thoracic tumour.

Dr. Venn read a paper on 'Post-Partum Hæmorrhage.'

January 20.

Dr. Hall showed a specimen of the sputum of a case of plastic bronchitis.

Mr. Hastings read a paper on 'Addison's Disease.'

After introducing the subject, the author gave a brief historical sketch of our knowledge of the malady.

The symptoms are those of increasing debility, languor, restlessness, depression, nausea and vomiting, with loss of appetite, pains about the loins, feeble heart's action, with bronzing of the skin, beginning in the most exposed parts. There is little emaciation, the temperature is rather low, and the mental faculties unimpaired.

Undefined in its outset, it usually ends fatally within two years. The progress is often intermittent.

Some cases are recorded which have remained latent and proceeded to a fatal termination in a few days.

The author related in detail the notes of a case in which he had verified the diagnosis by an autopsy. The state of the supra-renal capsules was abnormal, they were enlarged and adherent to the surrounding parts, with spots of pigmentation scattered over the surface. The substance was firm, yellow, and cut with difficulty. The left capsule contained three small cysts, full of pus and cretaceous matter, no distinction existing between the medulla and cortex. The right capsule was a putty-like mass, with a thin shell of fibrous tissue.

Mr. Hastings described the structure of the capsules, with special reference to their nerve supply, and considered the minute structure of the morbid changes to be identical with that of tubercle, the nerves and other adjoining structures becoming involved.

The general symptoms are similar to those produced by severe hæmorrhage, and are due either to the heart failing to supply blood in sufficient quantity to the brain, or to the blood being drawn away by the abdominal veins.

The pigmentation is seated in the deeper layers of the epidermis, and is more intense around the nipples, umbilicus, flexures of limbs, &c.

Mr. Hastings described the cutaneous pigmentation as being due to the dilatation of the capillaries from paralysis of the vaso-motor nerves, and refers to the pigmentation resulting from blisters as analogous. The dark lines and patches of pigmentation in the mouth are less easy to explain, though they partly depend upon irritation from the teeth.

Dr. Greenhow considers that the most frequent causes of this disease are abscess connected with the vertebræ, blows, strains, &c.

The disease is three times more common in men than in women, and occurs chiefly in adult life.

The vomiting is best treated by bismuth, hydrocyanic acid, &c.

The application of the continuous current to the hypochondria and sides of the neck has proved serviceable during exacerbations.

Mr. Hastings showed to the Society a patient with well-marked symptoms of Addison's disease.

Mr. Hames showed three patients illustrating the good effects of transplantation of the skin after extensive losses.

January 27.

Dr. Hall showed a patient (suffering with subacute rheumatism) having transposed viscera.

Dr. V. Harris showed a heart with vegetations on the mitral valve and purpura of the endo-cardium, spleen and kidney, with numerous infarcts.

The cerebellum had a large blood-clot on the right side.

Dr. Hall read 'Remarks on Diseases of the Heart.'

Attention was first drawn to the importance of a careful study of the subjective symptoms in heart disease, as Dr. Hall, though far from underrating the immense assistance to be derived from the use of the stethoscope, could not help believing that too much reliance was placed on the physical signs alone. The paper, which was of a practical nature, was chiefly founded on notes of fifty-two cases which had been under the author's care, those of disease of the mitral and aortic orifices being selected as by far the most numerous, and consequently the most important. In considering the etiology of mitral disease, in more than half the cases referred to it was due to rheumatism; pleurisy and chorea being other causes; in one-fourth of the cases the origin was not specified. As rheumatism, which is the most frequent cause of endocarditis, occurs chiefly in young people, so mitral disease is often met with at an early period of life, whereas aortic disease, being generally due to atheroma, is seldom found except in those advanced in years.

The symptoms of the various forms of heart disease were then treated of in detail. Palpitation was first considered, and Belingham's points of distinction between palpitation due to organic disease of the heart, and that independent of organic disease of the heart, were quoted with approval; but it was suggested that the list might have been augmented by stating how frequently palpitation is due to excess in tea and smoking, and to the consequent digestive derangements.

The causes of functional palpitation were enumerated as ollows:—

1. As occurring in young persons of both sexes, but especially emales, whose digestion is impaired, and who lead a sedentary fe; frequently associated with pain in the splenic region or in e intercostal muscles.

2. In old people, with degenerate arteries, the cause being obably a like degenerate change occurring in the heart from mpaired nutrition.

3. Of a reflex origin, due to the stomach being over distended ith food, or the ingestion of irritant articles, such as ice or ell-fish, in some persons.

4. A poisoned or depraved condition of the blood, as in gout, eumatism, anæmia, leucocythæmia, &c.

Under the heading of palpitation dependent on organic disease of the heart were grouped two distinct classes of cases.

1. Where there is some organic disease of the heart or its lves.

2. Where the heart is acting at a disadvantage in consequence of some displacement, as from pericardial or pleural fusion, &c., distension of the abdomen by flatus or fluid, &c.

s regards the cause of palpitation, the old idea that it was due increased action of the heart was discarded, and it was stated at palpitation implied not augmented power, but laboriousness action.

Palpitation is much more frequently met with in mitral than aortic disease, and this fact was well illustrated by the cases which the paper was founded.

Whenever palpitation occurs, the points to be taken into consideration are its severity, frequency, constancy, circumstances iving rise to it, such as exertion, going upstairs or uphill, ental emotion, &c.; and if these be well weighed, a correct onclusion can generally be arrived at as to its cause, though, of course, the physical signs will always be of the greatest importance in checking the result which may be arrived at.

Attention was next directed to dyspnœa, as being the symptom most commonly present in valvular disease of the heart, and the one which generally leads to the patient seeking medical advice.

The panting and gasping character of the dyspnœa, with the oppression at the chest, especially on making the slightest exertion, even in the early stages of heart disease, were alluded to. Dr. Ormerod's graphic description in his Gulstonian Lecture was quoted to show how patients with heart disease die.

The chief cardiac causes of dyspnœa were stated to be—

1. Failing power of the heart's action, due either to loss of blood or shocks to the nervous system.

2. Valvular disease of the heart, and especially of the mitral orifice.

3. Any displacement or other affection of the heart which interferes with the proper performance of its functions.

4. Degeneration, fatty or atheromatous, most frequently met with in people getting on in years.

The pulse has in all ages been rightly looked upon as a most valuable aid in diagnosis and prognosis, and in no disease more so than in cardiac affections. The pulse which has attracted the greatest amount of attention is that met with in aortic regurgitation, and called the 'locomotive pulse' by Bellingham and Todd, and by others named the 'water-hammer pulse' or 'the pulse of unfilled arteries." An easy mode of identifying an indifferently marked pulse of this description is to get the patient to elevate the arm above the head, so as to throw the force of gravity into the scale.

An intermittent pulse need not necessarily give rise to much anxiety, as it is frequently met with in people getting on in years without any other serious symptom, in gouty people, and in those subject to flatulent dyspepsia.

It is, also, however, met with in valvular disease, and in fatty and other forms of degeneration of the heart.

In an irregular pulse some of the beats are very rapid and others slow. An unequal pulse signifies that owing to a want of uniformity in the heart's action, the quantity of blood thrown into the arterial system varies, so that a full pulse may the next moment be followed by a feeble one. An irregular and unequal pulse are both of much more unfavourable augury than one which is simply intermittent.

The frequency of the pulse is an important point; a very slow pulse—say one of forty—would suggest the idea of fatty degeneration if met with in a person past adult life.

As a general rule, it may be stated that in mitral disease the pulse is frequent, quick, and irregular; whereas in aortic disease the pulse is of normal frequency, or it may even be somewhat less frequent than normal, slow and regular.

By frequency is understood the number of beats per minute, and by quickness the duration of the beat under the finger. Cough, which is so frequently met with in heart disease, and especially in affections of the mitral valve, is due to the congestion of the lungs. In aortic disease, so long as the compensative hypertrophy of the left ventricle is able to overcome the impediment to the circulation, there is an entire absence of any pulmonary symptoms.

Hæmoptysis is a very important symptom in cardiac disease, as it shows that the conservative power of nature, which has hitherto sufficed to keep the blood within the vessels, has at last given way, and the part where the block begins is that in which the hæmorrhage commences, and so we get hæmoptysis. It was shown that the blood in cases of heart disease came from the pulmonary capillaries, whereas in asthma it is furnished by the bronchial capillaries. Dr. Hyde Salter was quoted to prove that while the occurrence of the hæmorrhage has a very unfavourable influence on the prognosis of the heart disease, the prognosis of the hæmorrhage itself is not as a rule unfavourable.' In only three of the cases on which the present paper was based did hæmorrhage occur. Epistaxis and purpura are other forms of hæmorrhage due to cardiac disease.

Dropsy is another of the very common symptoms in cardiac disease, though generally a late one. It usually commences as a slight puffiness about the ankles, but in the progress of the disease anasarca may invade all the tissues of the body, and ultimately there may be fluid in all the serous cavities, and the patient usually dies from œdema of the lungs increasing the dyspnœa caused by the hydrothorax. The only other symptom to which allusion was made was that of pain or discomfort in the cardiac region.

The author's observations were quite in accordance with what Dr. Walshe says on the subject—namely, 'that pain is more commonly connected with disease of the aortic than of any other valves.'

Patients have various ways of expressing their pain and discomfort. One will say that he has a dull aching pain; another speaks of a gnawing pain; and a very common complaint is a feeling of tightness or constriction across the cardiac region.

As regards prognosis, many points have to be taken into consideration, such as the occupation, habits, and social position of the patient, as a gentleman of easy means, who lives a quiet and temperate life in a healthy climate, stands a very different chance to a labouring man addicted to drink and living—if such a word is not a misnomer—in one of the reeking dens which are such a disgrace to the civilisation of this great city.

In aortic regurgitation, as is now well known, sudden death not infrequently occurs, and it is a curious fact that the freer the heart is from any other disease, the greater is the liability to this termination.

In aortic stenosis patients may enjoy very good health so long as the compensative hypertrophy of the left ventricle is sufficient to neutralise the harmful effects of the diseased valves, and patients may not even suffer from dyspnœa, a symptom which, as has been already shown, is experienced in almost all cases of mitral disease. Death is usually brought about in aortic disease by œdema of the lungs, or more rarely by embolism. In aortic regurgitation apoplexy is sometimes the cause of the fatal termination. Another mode of death, as has been before stated, is syncope.

In mitral disease general dropsy, œdema of the lungs, hæmoptysis, and hæmorrhagic infarctions in the lungs, and intercurrent maladies, carry off the sufferers. As regards prognosis, one point is of particular importance, and that is, that the loudness of a murmur *per se* has nothing whatever to do with its gravity. A high-pitched loud murmur may simply be due to the vibration of a small vegetation on one of the valves, which interferes very little with the proper performance of its functions, whereas it is well known that even loud murmurs occasionally cease before death, owing to the heart being unable to propel the blood with sufficient force to cause the murmur.

The next division of the paper consisted of an abstract of the notes of typical cases of the various forms of heart disease, which may be omitted here.

The chief points to be observed in the treatment of patients suffering from mitral disease is to maintain their strength by appropriate diet, to give tonics, of which the preparations of iron, and especially the tincture of the perchloride, are the most useful; but of all drugs, *the* remedy *par excellence*, is digitalis. Its cumulative action has been held up as a bugbear, and has prevented full benefit being derived from it. A patient under the author's care suffering from mitral regurgitation took twenty drops of the tincture three times a day for a whole year without intermission, and improved in a most marvellous manner. Palpitation and præcordial pain are best relieved by the application of a belladonna plaster. Should hæmoptysis occur, the indication is to relieve tension in the vessels by hydragogue purgatives. Ascites and œdema are to be combated in a similar manner.

In the treatment of aortic stenosis the great object is to maintain the nutrition of the left ventricle, and prevent degenerative changes taking place, so that it may be enabled to overcome the obstruction offered by the contracted orifice. For this purpose the albuminous and fatty articles of diet, such as meat, milk, cream, cod-liver oil, &c., are very useful. Iron also acts as a blood tonic, and stimulant may be required.

In aortic regurgitation, on the other hand, the indication for treatment is not quite so clear, as the patients suffering from this form of heart disease appear more full-blooded than in aortic constriction, and may even suffer from apoplectic symptoms; consequently they do not stand quite so stimulating a plan of treatment. Like all sufferers from heart disease, they should be warned to keep quiet, to abstain from eating and drinking to excess, and a daily evacuation of the bowels should be secured. Dr. Hall laid down three rules for the use of digitalis in aortic disease—1. That it is contra-indicated in an uncomplicated case of aortic regurgitation. 2. That when the aortic disease is complicated with secondary mitral affection, it is often extremely beneficial. 3. That when the pulse is comparatively infrequent, say 60 to 72, digitalis is more likely to do harm than good.

Dr. Hall concluded by briefly alluding to the benefit to be derived from venesection to the amount of four to six ounces in cases in which the right side of the heart was engorged; the removal of this amount of blood would allow the ventricle to contract upon its diminished contents, and the impetus thus given would often continue for a long time. Repeated bleedings, by producing a state of anæmia, would be highly injurious, and tend to accelerate the fatal termination.

Mr. Schofield and Mr. Lewis showed some microscopical specimens.

February 3.

Mr. Mills read a paper on "The Administration of Anæsthetics."

Mr. Mills began by remarking that the administration of anæsthetics should not be left entirely to specialists, for any medical man may be called on at any time to give an anæsthetic, and every opportunity should therefore be seized of becoming thoroughly conversant with the best and safest means of administering one or more of them.

He then referred briefly to the history of anæsthetics, remarking that it is interesting to note that anæsthesia was not entirely unknown in A.D. 50.

Decoction of mandragora was recommended by Dioscorides to produce sleep in those about to undergo an operation.

Theodoric in the thirteenth century recommended that spongia somnifera impregnated with spirituous extracts of various narcotic substances should be held to the nostrils till sleep was induced. But anæsthetics did not come into use until 1844, when Dr. Horace Wells of Boston took nitrous oxide gas for extraction of a tooth, its properties having been discovered by Sir H. Davy in 1798. The properties of ether were discovered in 1818 by Faraday, and it was first employed by Dr. Morton in 1846. The properties of chloroform were discovered by Waldie in 1847. It was really first used in the form of chloric ether, which is merely chloroform diluted with alcohol, at St. Bartholomew's Hospital, by Sir William Lawrence and Mr. Holmes Coote. But Sir James Simpson was the first to use pure chloroform.

1. *Conditions supposed to contra-indicate the use of Anæsthetics.*

Much has been written about the danger of anæsthetics, especially chloroform, in cases of heart disease; but the only affection which contra-indicates them is fatty degeneration, which is extremely difficult to diagnose. And if it were necessary for a patient with fatty disease to undergo an operation, he would be much more likely to die from the shock of the operation without an anæsthetic than he would be to die from the anæsthetic, even were this chloroform, and there would be still less danger if ether were used.

Patients with slight valvular disease, who are otherwise healthy, as a rule take anæsthetics very well.

2. *Preparation of Patient.*

A patient who is about to undergo an operation under the influence of an anæsthetic should take no solid food for some hours previous, to lessen the chance of vomiting.

He should have a good meal about five hours before the time appointed for the operation, and after that nothing but beef-tea or soup with a glass of wine two hours before the operation.

It is very important that the stomach should be empty at the time an anæsthetic is given, not only on account of the danger of the patient being choked by some undigested portion of food being vomited into the pharynx, and at the next inspiration being drawn down into the larynx or trachea, and so asphyxiatng the patient, but on account of the accompanying faintness hich is so commonly seen both before and after the vomiting.

Without doubt the process of digestion is much interfered ith by the nervous state in which a patient always is previous the operation. This is particularly the case in nervous omen, who will sometimes vomit large pieces of undigested od during an operation, when it is certain they have taken othing solid for three or four hours previously.

What is the best course to pursue if retching occur while the atient is going under? Some say, Push the administration, nd the retching will pass off without vomiting. But this is y no means certain. It is better, therefore, to allow the patient come round a little, and encourage the vomiting; and if there e food in the stomach, get the stomach thoroughly empty (by ickling the fauces, if necessary) before proceeding any further ith the anæsthetic, and by this means all further trouble about ickness will probably be avoided. If after retching nothing omes up, and the stomach appears to be empty, the anæsthetic hould be continued, and as the patient gets under its influence he retching will pass off.

A case was then related in point.

3. *Relative Merits of Chloroform and Ether.*

Mr. Mills remarked that much has been said of late as to the elative merits of chloroform and ether, and numerous letters have een written in the medical papers. But up to the present time hloroform has been used so many more times than ether that it s not possible to say for certain which is the better anæsthetic; ut from experiments on animals, it appears that the heart may e paralysed by chloroform, but not by ether.

Judging from the experience he had had of the action of the wo, Mr. Mills remarked that ether is decidedly the more stimu- ating, chloroform acts rather as a depressant. He had never een that faintness under ether which is common towards the nd of long operations under chloroform.

Persistent after-sickness, which is sometimes so very trouble- ome after chloroform, is very rare after ether. He had met with but two cases in nearly one thousand administrations.

The reason that the use of ether was given up for that of chloroform was, that it required much more of the former drug to produce the desired effect; it was much more unpleasant to breathe, producing a disagreeable sensation of choking; it took longer in action; there was often much struggling while the patient was going under; and it was followed by a delirium resembling that of intoxication.

But by the improved methods of administering it which have now come in use, many of these disadvantages are entirely done away with.

He referred especially to the plan of giving some nitrous oxide gas first.

So far as it is possible to judge at present, there seems to be less danger attending the administration of ether than that of chloroform, and it should therefore be used in all suitable cases.

4. *Cases in which Chloroform is to be preferred.*

In some cases chloroform is preferable; in operations about the mouth and nose, for instance.

The influence of chloroform lasts longer than that of ether, and it can very conveniently be given on a piece of lint when there is a gag in the mouth, which would admit too much air, and be very much in the way of a face-piece if ether were given. In addition to this, ether causes much more coughing and choking, and excites a flow of viscid saliva, which is very unpleasant in such an operation as cleft palate, where the operator requires the parts to be as still as possible, and it is necessary for the surgeon to get a good view of them without the necessity of perpetually sponging out saliva from the fauces.

In delicate operations about the eye, Mr. Mills said he prefers chloroform, as it causes less congestion and hæmorrhage, and the patient, as a rule, is quieter under its influence.

In cases of fracture which require an anæsthetic whilst the parts are being placed in apposition during the time the muscles are relaxed, chloroform is preferable, because patients recover quietly from its effects; the inhalation of ether being generally followed by a state of noisy delirium and struggling, which would be likely to displace the fractured ends, and necessitate their readjustment.

For children, too, chloroform is generally used, because they take it so well, and it is very rarely followed by any unpleasant symptoms.

5. *Chloroform.*

Many different kinds of inhalers have been invented for giving chloroform, but Mr. Mills said that he preferred just a doubled piece of lint, on which a little chloroform is poured from time to time from a drop-bottle.

When fresh chloroform is put on, it should be held two or three inches from the patient's face, and gradually brought nearer as the vapour gets weaker. This requires a little practice, but one soon gets into the way of doing it almost mechanically. It is just as well to smell the lint occasionally, to ascertain that there is sufficient chloroform on it without its being too strong.

The best apparatus for giving chloroform, if one be used, is Mr. Clover's.

The apparatus was shown, and the way in which it is used described.

The chief objections to this apparatus are that it is expensive and cumbersome; and as some patients require a much stronger dose than others, it may be necessary to refill the bag in the middle of an operation, which is very awkward unless there is some one at hand to assist. Then, again, unless great care is taken, there may be too large a percentage of chloroform to air. The apparatus may, moreover, get out of order from disuse; one case of this kind has happened, and resulted in death to the patient. It was found that instead of 1100 cubic inches of air having been passed into the bag, only about 840 had.

However, it is a very ingenious apparatus, and in the hands of Mr. Clover works admirably.

The patient should be in the recumbent position, should have none but light garments on, and these should be quite loose. All that is required is a drop-bottle containing the chloroform, a piece of lint, and a pair of dressing forceps.

The patient should be told to breathe quietly, and not to take violent inspirations. It is well to begin by dropping very little chloroform on the lint (from five or ten to twenty drops, according to age), and hold it about two or three inches from the face, just to allow the patient to become accustomed to its smell. This should gradually be brought nearer to the face, and the quantity from time to time increased, but gradually, so as not to provoke coughing or choking; if either of these occur, the lint should be held a little further from the face for a time.

'If we begin with very small proportions of chloroform and gradually increase it, we find that the system gradually accommodates itself to the influence, there is no discomfort or terror at the outset, there is no resistance, and the phenomena assimilate to those of natural sleep.'

Claude Bernard has proved by experiments that animals accustomed to vitiated air will live in an atmosphere that is instant death to a healthy animal. A sparrow will live for three hours in a glass bell breathing the same air over and over again, but if a fresh sparrow be put in at the close of the second hour it will immediately die.

The pulse should be held with one hand and the lint with the other. The respirations and the face should be carefully watched.

At first the patient should be allowed to lie comfortably without being held. As he begins to struggle, he should be held sufficiently to prevent his raising himself, and to prevent his doing any mischief with his legs and arms, but it is not necessary to lean your whole weight on him and keep him absolutely still. Patients suffering from delirium tremens and drunkards always give the most trouble in this stage. In any case, there is always less struggling if the administration is gradual and not hurried.

It is of the greatest importance to watch the patient carefully during this stage.

Mr. Mills thought it best to go on with the administration when an unusual amount of struggling and straining occur, unless the breathing be impaired, in which case the lint must be removed and the patient allowed to have a few inspirations of pure air, and then if breathing well, the chloroform may be continued. It is best while the patient is going under to turn the head to one or other side.

A patient is generally said to be ready for the operation when touching the inner border of the eyelids or ocular conjunctiva produces no reflex action; but the cornea is more sensitive than the conjunctiva, and it is better to judge by it. The eye is, however, by no means a certain test, as its sensitiveness varies very much in different patients, and it is best to judge also by the relaxation of the muscles.

Some patients are ready for the operation when the cornea is still sensitive; others will start if the operation be commenced though the cornea be insensitive.

For operations about the more sensitive parts, as the genitals or anus, it is necessary to get the patient more deeply under. The operation in these cases should not be commenced until the pupil no longer acts with light. If the chloroform be pushed further than this, there may be loss of reflex action in the involuntary muscles, and in some cases, especially in children, expulsion of fœces and urine. The muscles used in respiration may fail, and lastly the heart itself stops.

When the patient is under, he should be kept so with small quantities of chloroform. Time should not be given for him to come round before putting on more. It is well to remove the lint for a few seconds just as he gets under, because of the cumulative property of chloroform. Its effects may become more intense half a minute after leaving off administering it, hich is no doubt due to a portion remaining in the lungs hich is afterwards absorbed.

The pulse generally beats quicker at first, then sinks to normal, d in long operations may become slow and weak. It may come irregular or cease suddenly.

The respiration must be carefully watched. It is not sufficient simply watch the chest-walls and abdomen, we must listen to e breathing, especially when there is the slightest doubt, as the est-walls will sometimes go on moving though no air is enterg the lungs. The respiration may become slow and shallow, d if the chloroform be pushed too far, may cease altogether. shallow, it may often be improved by drawing the chin from e sternum. If it stop, the administration must of course be mmediately stopped, and without loss of time. The sternum ould be compressed once or twice, and this will generally duce respiration; but if it fail, the tongue must be drawn rwards with a pair of forceps, and Sylvester's method of articial respiration used without delay, but with this difference om the ordinary mode, that the arms must be first pressed to e side to empty the lungs, and then drawn over the head. If is does not at once succeed, it should be continued, and if ecessary persevered with for an hour or an hour and a half, or s long as there is any hope of recovery.

Galvanism should be applied, one pole to the epigastrium and he other to the neck, to galvanise the diaphragm and phrenic erve. The current should be broken while the chest is being ompressed, and applied while the arms are being raised, to mitate natural respiration, and because strong and continuous urrents appear rather to exhaust than to restore muscular ctivity.

A hot-water bottle should be applied to the legs and friction mployed, and the patient kept warm with blankets.

An enema of brandy may be given per rectum, and when the atient has come round sufficiently to swallow, brandy should e given by the mouth.

Sometimes the pulse stops simultaneously with the respiration, nd there is then of course less probability of resuscitation; but ome cases have by prompt and active treatment, such as that which has been just described, been brought round even when this has occurred. No time should therefore be lost in employing them. Nélaton's method too, of supporting the patient by the legs, head downwards, has proved successful in some cases.

Mr. Mills said he thought, as Dr. Snow had said, that 'such remedies as dashing cold water on the patient and applying ammonia to the nostrils can hardly be expected to have any effect on a patient who is suffering from an overdose of chloroform, for they would have none whatever on one who had inhaled it in the usual manner, and is merely ready for the operation, but in no danger.'

During the excited stage the conjunctiva becomes congested, particularly if there is much struggling, and the pupil dilates; but as the patient gets under, the pupil contracts, and when fully under does not act with light. Dilatation generally occurs when the patient is about to vomit.

Snoring may be caused in two ways. The first, or palatal stertor, is like the snoring of natural sleep, and is of no consequence; it is merely caused by the flapping of the soft palate, and may occur at any time during the administration. The second, or laryngeal stertor, is of great importance, because it only occurs when there is some obstruction to the entrance of air into. the larynx. It generally occurs when the patient is deeply under, and is more laryngeal in character. It is caused by the falling together of the parts at the opening of the larynx. The tongue is apt to fall back unless the face is turned well over to one side.

When this sound is heard the administration should be stopped, and the chin drawn forcibly away from the sternum; by this means the apposition of the epiglottis with the back of the pharynx is prevented, and the air-passage straightened. If this does not stop the stertor, and there is reason to think that sufficient air is not entering the lungs, the tongue must be drawn forwards with a pair of dressing forceps; but this last procedure is very rarely necessary if the precaution has been taken to turn the head over on one side, and drawing the chin from the sternum generally stops the stertor.

The face sometimes becomes somewhat livid during the struggling stage; the lint should then be held further from the face, because, as the patient is slightly asphyxiated, it is very undesirable to give too strong a vapour of chloroform.

Or the face may become livid when laryngeal stertor occurs; or if the breathing be otherwise impeded, as by spasm of the glottis, which is induced by giving too much chloroform at the commencement of the administration; or by a clot of blood in the larynx, which is only likely to happen in operations about the mouth or face. The chloroform must be stopped when lividity occurs.

Mr. Mills then related a case in point. The operation was for the removal of a tumour of the superior maxilla in a woman, and was accompanied by profuse hæmorrhage. The patient took chloroform very well, but towards the end of the operation he noticed that although the chest-walls were moving, no air was being respired, and the patient was becoming rather livid. Not more than a minute before this she had been turned over on to her side, and her mouth was opened just to ascertain if any blood had found its way into the mouth. As none was found, she was turned on her back again and the operation proceeded with. She was then breathing well, and one minute afterwards it was found that no air was entering the lungs. She was immediately turned on to her side again, her mouth was opened, some blood ran out, and he pulled from the back of the throat and larynx two large blood-clots. She then immediately took some deep inspirations and went on breathing. Her pulse remained good. This case shows the advantage of listening to the respiration carefully, and also watching the face; for though the chest-walls were moving, no air could be heard entering the lungs, and the face was becoming slightly livid.

The face may become white from loss of blood in the operation, or because the patient is about to be sick, or because he is faint from the effects of chloroform. In any case, the administration should be stopped and the head lowered; if it does not soon pass off, it is well to give some hot brandy-and-water.

It sometimes happens during the early stage of the inhalation that the patient has a fit; although this is rare, it is well to consider beforehand what would be the best course to pursue if such a thing happened.

An hysterical fit is not dangerous, and so the chloroform should be continued, and it passes off satisfactorily; but in an epileptic fit there is always danger on account of the asphyxia. The chloroform must therefore be instantly stopped should this occur.

Death may occur suddenly, from sudden cessation of the action of the heart, or from spasm of the larynx, induced by giving too large a proportion of chloroform to air at the commencement. And it is also said to occur from shock, from an insufficient quantity having been given.

Death may occur gradually, by asphyxia, from an overdose, or from obstruction to the air-passages; or by syncope induced by hæmorrhage, vomiting, or an overdose.

6. *Nitrous Oxide Gas.*

Nitrous oxide gas being without smell, is the most pleasant anæsthetic to take. It is suitable, however, for short operations only, such as the extraction of a tooth or opening an abscess, and the chief thing in its administration is to take care that no air is admitted, and to see that the respiration is not impeded.

If used for extraction of a tooth, a small gag or prop should be placed between the teeth at a convenient distance from the tooth to be extracted, to keep the mouth wide open. Having ascertained that the gag is held firmly between the teeth, the administration may be commenced.

The patient may be told to take good deep inspirations. It is a very good plan to allow the patient to hold the operator's hand while going under, and as the muscles become relaxed, the hand drops, and he is then ready.

It may be taken sitting up or lying down. If the breathing is arrested, one compression of the sternum will generally suffice to restore it.

It leaves no unpleasant symptoms, such as headache or sickness.

If faintness occur, the patient's head should be lowered.

One death only is reported. Gas was given for the extraction of a tooth. No post-mortem examination was allowed, but a piece of the gag used was missing, and whether or not it found its way down the larynx has remained a mystery.

Good strong gags should therefore always be used, and care taken that the teeth when extracted are not left loose in the mouth.

Mr. Mills showed a very convenient apparatus for administering the gas, and some gags made by Mr. Lyons.

7. *Ether.*

The ether which should be used for inhalation is the pure anhydrous ether, or the anhydrous methylated ether with a specific gravity of about 720. The latter being made from methylated spirit, is cheaper than the former, but is equally good for inhalation, and has been used by Dr. Keith of Edinburgh for many years.

The same preparations that are necessary before chloroform, are necessary before the inhalation of ether, but the patient should particularly avoid stimulants for some hours before the operation. The ether itself acts as a stimulant.

It may be given on a towel rolled up into a cone with a sponge fixed in the apex, or on a felt cone made for the purpose. It is very unpleasant to breathe, and generally causes a sensation of choking or suffocation, and induces coughing and salivation.

The patient, if an adult, should be warned that after a few moments' inhalation, it will give rise to a very unpleasant sensation of choking, and he should be exhorted when he feels this coming on to take a few good deep inspirations, instead of trying to put the face-piece off, and the unpleasant feeling will then soon pass off. At the same time, preparation must be made, with the assistance of others, to hold him firmly at this stage, should he struggle and endeavour to pull the face-piece off. It is very oolish to allow him to come round and to argue with him, because he is simply intoxicated with ether, and it will then be necessary to go through the same thing again; and if you hold him, and keep the face-piece on, he will soon get under, and on oming to, will remember nothing about the struggling.

The administration differs from that of chloroform, too, nasmuch as it is not necessary to commence so gradually. An ounce may be poured on to begin with, and another ounce added rom time to time to keep the towel or felt saturated with ether until the patient is well under. Very little air is required. If he become livid, the face-piece should be removed for one or two espirations, and then replaced, recovery being very quick in the early part of ether inhalation.

The pulse is generally quick and bounding from beginning to nd, and the respirations are forcible and quick.

The patient is ready for the operation when the muscles become relaxed; it is seldom necessary to get the conjunctiva nsensitive, but this varies very much, more even than with chloroform.

Some patients can take ether with comparative ease, and others cannot be induced to inhale it. Mr. Mills recommended hat in the latter case chloroform should be given until the commencement of the exciting stage, when the air-passages become insensitive, and then ether substituted.

8. *Nitrous Oxide Gas and Ether.*

Mr. Mills then described Clover's apparatus for giving nitrous oxide gas and ether, the apparatus which is now commonly in use for nearly all operations at St. Bartholomew's Hospital. Its object is to give some gas to render the air-passages insensitive before giving the ether. In this way the patient goes quickly and quietly under the influence of the gas without struggling or coughing.

Mr. Mills said that he first tried giving gas with an ordinary gas-apparatus, and having got the patient under its influence, quickly substituted an ether-inhaler for the gas face-piece; but the patients recovered from the effects of the gas, and struggled violently before the ether had time to have more effect than to cause excitement. But by Clover's apparatus the ether is turned on gradually after a few inspirations of gas, then without removing the face-piece the gas may be turned off and ether onl breathed; so that when the gas is turned off, and ether turne on, the patient has already been breathing ether.

Mr. Mills, in recommending this apparatus, said that it was particularly advantageous in dental cases. Patients generally recover from nitrous oxide gas somewhat suddenly, but if some ether is given too, they remain much longer narcotised, and awake gradually. Then, too, the amount of ether can be so easily regulated, according to the time the effects are required to last.

If ether alone is given, it takes some time for the patient to get under its influence. If ether is preceded by gas, the patient is under in about a minute and a half or two minutes; and in short operations, having inhaled less ether than if it were used from the commencement, requires a shorter time to recover from its intoxicating effects. Indeed in this way ether may be given in dental cases sufficiently to very materially prolong the effects of the gas without leaving any intoxication whatever.

The administration by this apparatus certainly requires a little care and practice. The most difficult part of it is to know exactly when to turn on some ether.

If it is turned on too soon, it induces coughing and struggling. If it is not turned on soon enough, the long-continued inhalation of the gas produces so much lividity that it is necessary to allow the patient one or two inspirations of fresh air, and then he is almost sure to come round. It is most difficult to lay down any rule as to when the ether may be turned on; it requires a considerable amount of judgment, but, as a rule, from about the eighth to the twelfth inspiration seems to be the best time.

But patients breathe in such different ways, that one cannot, say for a certain time or for a certain number of respirations, give gas and then turn on ether.

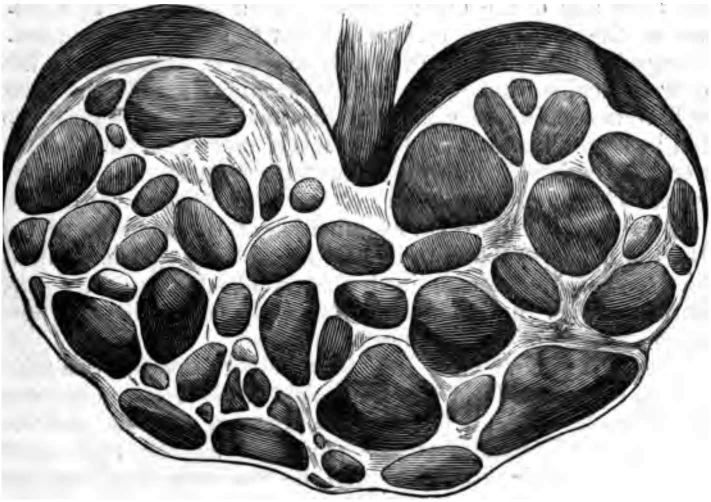
Some being perhaps afraid of the gas, take very small inspirations at the beginning, and so take longer going off.

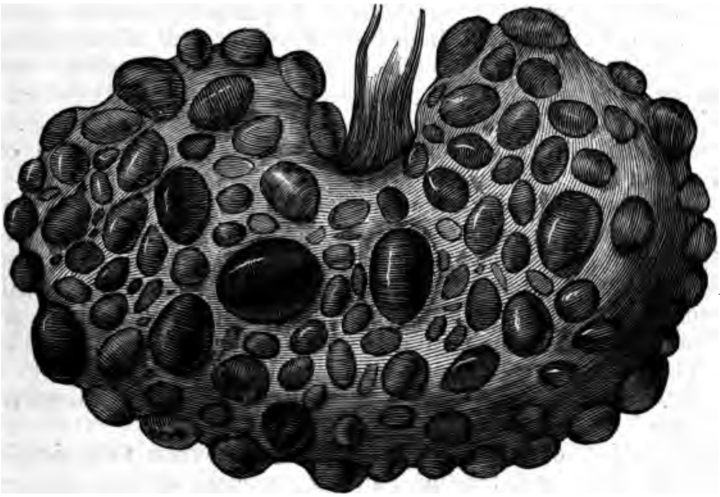
If on turning on the ether there is any coughing, it must be turned off again for one or two inspirations; but it is desirable to begin the ether as soon as it is possible to do so without causing any unpleasantness, and gradually turn on more and more until only ether is being inhaled. Then the face-piece should be removed once in about six or eight respirations, and more frequently towards the end of long operations, to allow the patient to get a breath of pure air.

February 10.

Dr. Vincent Harris showed two kidneys presenting wellarked cystic disease, and read short notes of the case from hich they were taken.

The kidneys (engravings of which are appended) were enlarged,





easuring six to six and a half inches in length, and four in readth, and weighing about twenty-two ounces each. The surface of the kidneys was irregular, being studded with large and small cysts, containing fluid, varying in colour from a pale straw to a dark reddish brown. The largest cysts were situated along the convex borders of the kidneys, and were of the size of a nut; the size of the others varied from a pin's head upwards. Some of the cysts were collapsed, but the majority were tense. The capsules could be removed only in places. On section, the proper cortical substance was almost entirely occupied by cysts and fibrous matrix; very little of the medullary substance also could be seen. The cysts appeared larger on section than before. Several of the largest measured about three-quarters of an inch across. The pelves and ureters of the kidneys were not dilated or otherwise abnormal. On examination of the contents of the cysts, the flüid was found to be very albuminous ($\frac{1}{3}$), and faintly acid. The sediment contained altered blood-cells, fatty and granular débris, and numerous plates of cholesterine. There was no evidence of the presence of uric acid.

Notes of the case.—G. F., æt. 48, a butcher's porter, was talking with some friends in the Smithfield Market on January 4, 1876, when he suddenly fell down, became unconscious, and was found by the bystanders to be paralysed on the right side. When admitted into the Hospital, he was semi-conscious, but soon became quite comatose. His pupils were equal, not contracted, and acted to light. Temperature, 97·6° F. Pulse, 100; full and regular. He continued in very much the same state until the time of his death on the 7th, except that his temperature gradually rose, and reached 102° just before he died. On the only occasion when it was possible to save a little of his urine, it was found on examination to be pale, cloudy, of specific gravity 1016, and to contain lithates and a slight trace of albumen.

Autopsy disclosed a large clot on the left side of the brain, disorganising the corpus striatum and optic thalamus, and extending into the lateral ventricle. The left side of the heart was hypertrophied and dilated, without valvular disease, and the arteries generally were atheromatous. Pleuro-pneumonia in an advanced stage on the right side was discovered.

The kidneys have been already described.

Mr. Samuel Benton read a paper upon 'The Treatment of Talipes.'

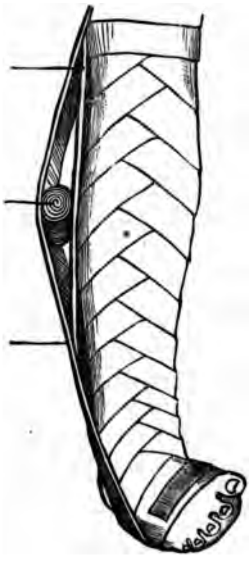
The object of this paper was to draw attention to a simple and efficient way of treating patients, especially children, suffering from club-foot, without recourse to operative measures and expensive instruments.

The usual cause of failure in curing cases of talipes is—1stly, want of perseverance and daily attention; 2dly, discharging them without a proper-shaped shoe, or some retaining apparatus.

Great stress was laid upon the indisputable advantages of tenotomy, but its practice being easy, and apparently devoid of risk, the operation is now very often abused.

As Dr. Little has it, no surgeon is justified in operating upon a child, unless he personally, or a trustworthy assistant, can conscientiously follow up daily the after-treatment, which is of far more importance than the division of tendons. It is very difficult, indeed, to overcome re-contracted tissues, except by slow and cautious proceedings, and it then requires the greatest vigilance to prevent a slough.

Each case of talipes needs a different, or at least some modification in the treatment, therefore it is impossible to contrive a boot which will cure all cases. In fact, in many cases, by ordering an expensive instrument, the deformity is eventually aggravated.



More depends upon the tact, patience, and perseverance of the surgeon than upon the apparatus employed. The daily application of a few strips of adhesive plaster, a wooden splint, and a cleverly-adjusted bandage, may in ingenious hands supply the place of the most elaborate contrivances (*vide* woodcut). After the restoration of the foot to its normal position, a retaining apparatus must always be employed; by this means repetition of operations and treatment is rarely requisite. The paper was illustrated by a number of cases which had been successfully treated by bandaging.

Mr. Benton also showed a variety of appliances used in the treatment of talipes, many of these being made by Messrs. Arnold & Sons under his own direction.

Particular attention was called to a retentive boot worn after treatment, by which means the foot could be turned in or out by the aid of a simple screw at the heel.

February 17.

Mr. Macready read the notes of a case of stricture of the urethra. The patient was admitted to the Hospital, and after thirty-six hours rest in bed a No. 3 catheter was passed with difficulty. The urine was drawn off, and a few drops of blood followed the withdrawal of the catheter. Within an hour a severe rigor occurred, and delirium set in. The rigor lasted fifteen minutes. Temperature, 108°. Pulse, 132. (A slight rigor after the passage of a catheter was not unusual in his case.) Copious sweating ensued, and within two hours vomiting of dark blood-stained matter. Temperature, 106°. The following day the patient was collapsed, sweating profusely. Temperature, 102°. Death occurred the following day, the patient having had almost complete suppression of urine since the rigor.

Mr. Schofield read the notes of three cases—two of them albuminuria, the third empyema.

The interesting features of the first case were—

1. Considerable prolongation of life, though the patient seemed to be *in extremis* on admission.
2. Large quantities of albumen and casts in the urine contrasted with great diminution before death.
3. Total suppression of urine on two occasions for forty-eight hours without coma or convulsions.
4. Great relief was afforded by wet cupping.

In Case II. the absence of pulmonary and heart complications, the slight œdema and the uræmic convulsions ending fatally. General eczema occurred, and was cured by a sitz bath.

In Case III. was exemplified the difficulty of diagnosis and the sometimes negative results of exploratory puncture with a fine trocar; also the advantage of thoracentesis.

February 24.

Mr. Burgess showed a congenitally malformed heart with an imperfect ventricular septum.

Dr. Brunton read a paper on 'Diuretics.'

The motions of the body are kept up, like those of the steam-engine, by combustion. In both, carbonic acid and water are formed by the process, and an incombustible residue of ash is left behind. The carbonic acid and water pass off by the chimney in the steam-engine, and by the lungs in the body; while the ash falls into the ashpit in the steam-engine, and the products of waste in the body are excreted by the kidneys. The bladder in which these waste products temporarily accumulate before being finally ejected may therefore be compared to the ashpit of the steam-engine, and the kidneys to the grated floor of the furnace, which allows the ash to fall through, while it retains such large cinders as are likely to be of still further use in keeping up the fire, although very small ones may be allowed to pass. Thus the healthy kidneys will allow not only urea, the ultimate product or ash of the combustion of nitrogenous substances in the body, to pass freely through them, but also uric acid which is not completely oxidised, and might be compared to a small cinder. On the other hand, however, they refuse to let albumen or peptones, which may be compared to fresh coals, pass through them; nor even under ordinary circumstances do we find kreatin, kreatinin, and suchlike substances, which we may compare to large cinders, in the urine.

But while the function of the kidneys resembles that of the furnace bars in affording an exit to waste material while retaining substances of value, the manner in which the function is discharged in the two cases is totally different, the grating acting like a simple sieve, the kidneys like a most complicated filter. The arteries of the kidney divide within the organ into branches, which without anastomosing with each other in the manner in which arterial twigs usually do in other parts of the body, suddenly break up into little bundle-like plexuses, the glomeruli, as if the usual anastomoses had all been collected into one small point in each vessel. The vessels in these anastomosing bundles again unite into a single one called the efferent vessel, and in contradistinction to the one which branched out to form the plexus, which is termed the afferent artery. The arrangement of these two is very peculiar, and deserves particular attention. The whole plexus or glomerulus is enclosed in a bag or capsule, the purpose of which we will consider presently. The afferent artery and the efferent vessel both pass through the same aperture in this bag, but the afferent artery begins to divide into a plexus as soon as it gets inside the aperture, while the efferent vessel comes from the very middle of the plexus. In consequence of this the blood flows easily through so long as the pressure in the interior of the efferent vessels is moderate; but when it becomes too great, they press the branches of the afferent vessel against the sides of the capsule, and so close them. The flow through the afferent vessels is thus stopped until the efferent vessels have had time to empty themselves, so that we have here a regular governor-ball arrangement to guard against any excessive pressure in the glomeruli. This, at any rate, is the explanation given by Ludwig, and I believe that it is quite correct; but at the same time this arrangement reminds me strongly of the operation of wringing a towel, and the intermittent squeezes given by one set of arterioles to the other must, I think, assist in pressing fluid out of them. For this part of the kidney is a filtering apparatus, the glomerulus being the filter through which water holding in solution urea and salt passes from the blood into the capsule, which is the funnel wherein they are collected. From this capsule a tube passes, which at first is wide and winding, afterwards becomes narrow and straight, and then becomes again wide and winding before it passes finally into a wide straight tube. The fluid from the capsule would easily flow away if the tube were wide along its whole length, but the contraction prevents this, and obliges it to remain for some time in the wide part at the beginning of the tube, and only allows it to flow slowly away.

The efferent artery, after leaving the glomerulus, breaks up into a plexus which is distributed over the surface of these tubes. Thus the blood, which has been deprived of much of its water in the glomerulus, again comes into close contact with the fluid it has lost, but separated from it by the epithelium lining the tubules. Here the blood again takes up some of the water and salt, leaving the urea, so that the solution of urea gets more and more concentrated as it passes along, until it is discharged along the straight tubes into the ureters. Thus, the greater the pressure behind, the more quickly does it flow, and the less time is there for absorption and concentration in the tubules. The less the pressure behind, or the greater the resistance in front, the more slowly does it flow, the more time is there for absorption, and the more scanty and concentrated is the urine. There are thus two factors which cause the amount of urine to vary—1st, The pressure of fluid from behind, *i.e.*, the pressure of the fluid exuding from the glomeruli; and 2d, The resistance in front, which consists chiefly in the pressure of urine in the ureters.

We will now consider these separately. 1st, The pressure from behind. The quantity of fluid exuding from the glomeruli depends in the kidney, as in an ordinary filter, upon the pressure within them. The greater the pressure of blood, the more fluid passes out of the vessels into the capsule. As we have seen that this increases the rapidity of the flow within the tubuli, and does not allow time for absorption, it is evident that increased blood-pressure must increase the flow of urine in a double manner, and at the same time render it more watery.

Now the pressure in the glomeruli may be raised or decreased like the pressure in a gas-jet. Just as the pressure of gas in the burner rises or falls with the pressure in the main, so does that in the glomeruli rise and fall with the general pressure of the blood in the aorta and arterial system. You cannot have a high pressure in your burner if that in the main is low, and you cannot have a high pressure in the glomeruli if that in the aorta is low; but still you can modify the pressure in your burner within certain limits, by means of the stopcock, letting on the gas fully when the pressure is low, and turning it partly off when too high; and so it is with the kidney. When the arterial pressure is low, the renal arteries can dilate and let in more blood, and when the arterial pressure is too high, they can contract, and prevent the pressure in the glomeruli from being too great; but notwithstanding this modifying power of these vessels, the blood pressure in the kidney, as a general thing, rises and falls with the general blood pressure.

This pressure may be raised by drinking water, and thus increasing the bulk of the blood, and large draughts of water form a most efficient diuretic. The pressure also rises when the vessels of the skin are contracted by the application of cold, and the blood they would otherwise contain is driven in upon the other vessels. In some experiments I made several years ago, I found that if the weather suddenly changed from warm to cold, the excretion of urine rose to nearly double its previous amount.

It is possible also to raise the pressure locally by dilating the renal arteries, and Claude Bernard says that irritation of the vagus has the power to do this, and so to increase the secretion of urine. Blood pressure may be lessened generally by abstinence from fluids, by heat, which dilates the vessels, by general debility, causing loss of tone, and all these lessen the urine.

It may be lessened in the kidneys by the contraction of the renal vessels. But the contraction must be considerable to do this.

If the artery does not contract to less than one-half its usual diameter the flow of urine is not diminished, but if it is contracted to less than one-ninth the flow of urine is entirely stopped; and after the circulation is allowed to go on again the urine secreted becomes albuminous.

The contraction of the renal arteries may be caused either by the vaso-motor centre in the medulla, or by conditions present in the kidney itself, of which a different composition of the blood passing through it is, in all probability, one of the most important.

Having now considered the means by which the pressure of blood in the kidneys and the flow of urine from them may be increased or diminished, we may now proceed to consider the action of diuretics.

The first of these is water. This increases the pressure in the glomeruli by augmenting the bulk of the blood, but it increases the amount of urinary water out of proportion to the increase in blood pressure. This is probably because the blood, after leaving the glomeruli and passing into the plexus, is not so greedy of water as it would otherwise be, consequently does not abstract so much from the liquid contained in the tubules.

The next diuretics are common salt, and other salts of potash and soda. These act as diuretics by causing people to drink more than usual by the thirst they create; but this is not all.

They have a specific action on the kidney, and cause it to secrete more urine even when its nerves are cut.

They may do this by causing contraction of the efferent vessels and plexuses, and thus raising the pressure in the glomeruli, but this we cannot be certain about.

The third diuretic in my list is digitalis. This drug in moderate doses causes the vessels to contract and the blood pressure to rise, and it thus acts as a diuretic. But in dropsy it has a further action; and after its administration the fluid which has been effused into the tissues is often seen rapidly to disappear at the same time that the urine has been increased. Now we might say that this effect was simply due to the blood sucking up the fluid from the tissues, in order to replace what had been drained away from it in the kidneys. But this does not seem to be the whole truth.

Œdema, we must remember, depends on more fluid exuding from the blood-vessels than can get back by the lymphatics and veins; in other words, it is the *excess* of fluid which has filtered out from the vessels. Now the amount of fluid which filters out from the vessels generally bears exactly the opposite relation to the general blood pressure that the secretion of the kidney does. When the vessels generally contract the blood pressure rises, and the kidney secretes copiously, but the very contraction of the vessels which supplies this organ with extra blood is cutting it off from some others, and is lessening the supply of fluid to them.

At the same time the absorbents take up the fluid more rapidly from the tissues, and the œdema is diminished in a twofold way. There is less fluid poured out into the tissues, while there is more taken from them, and the excess is poured out by the kidneys.

This effect of digitalis is due to its action on the vaso-motor centre in the medulla oblongata, by which it influences the vessels of the body generally.

But Mr. Power and I have found that, in addition to this general action, it has a special action on the vessels of the kidney. When we gave a large dose of digitalis to an animal we found that the blood pressure rose, but instead of the urine being increased, as it ought to have been, the secretion stopped altogether for a while, and then began to flow with great rapidity, although the blood pressure had now sunk below the normal, and the urine ought, according to rule, to have been scantier than normal.

The explanation we gave of this curious fact was, that the digitalis had at first caused contraction of the arteries generally, and so raised the blood pressure in the aorta, but had at the same time caused the renal arteries to contract so completely that no blood flowed through them, and thus their secretion was arrested. When this action upon the vessels began to pass off the renal arteries dilated more quickly than the others, so that the proportion of blood running into them raised the pressure above the normal.

Now this action of digitalis on the renal arteries leads us to consider another function of the kidneys, viz., that of eliminating poisons, and gives us an explanation of the so-called cumulative action of the poisonous substances which we use as remedies.

A great number of poisons are eliminated by the kidneys, and are thus prevented from exercising any prejudicial effect upon the body.

The arrow poison, woorari, produces paralysis when injected into the blood or into a wound, but is harmless when swallowed. The reason of this is that it is excreted by the kidneys as quickly as it is absorbed from the stomach, and thus there is never a sufficient quantity in the blood to produce any bad symptom. But if the kidneys are extirpated or the renal arteries tied, it cannot get out by the kidneys, and thus accumulates in the blood and causes death. Now most of the drugs we use, when given in larger quantities than can be eliminated, begin to show a gradual increase in their action, but there are two which form a marked exception. These are digitalis and strychnia, which, after being continued for some time, occasionally cause sudden symptoms of poisoning, and on account of this peculiarity they are specially said to have a cumulative action. The reason why digitalis does this, I believe, is, that after it has been accumulating gradually in the blood, it begins to act on the kidneys in the way I have mentioned, and thus stops its own elimination, and suddenly accumulates in the blood, although the quantity taken by the stomach is not increased. In support of this, I may mention that a sudden diminution in the secretion of urine precedes or accompanies the appearance of the symptoms of poisoning in these cases, and in one instance the urine was stopped entirely for about two days. I do not know whether strychnia has a similar action on the renal arteries, but I think it highly probable.

This action on the renal arteries also explains the fact that sometimes digitalis will not act as a diuretic at all, for if it persistently keeps up contraction of these vessels, it is evident that no contraction of those in the other parts of the body will increase the blood pressure and the secretion from the kidneys.

Besides digitalis, we have several other diuretics of great repute—viz., squill, broom tops, spirits of nitrous ether, buchu, pareira, &c.; but how these act we do not know.

I have now come to consider the effect of resistance in front as a cause of diminished secretion. While we are standing or sitting, the kidneys are high up above the bladder, and the urine runs freely down the ureters, so that there is no pressure to retard secretion. But in the recumbent position this is not the case, and although the pressure the secretion has to overcome is but slight during health, yet still it does exist, and may be one cause why we pass less urine during the night than during the day.

In diseased conditions, however, the pressure may be greatly increased, and may form an important hindrance to the action of diuretics. Thus in dropsy, when a great accumulation of fluid has taken place in the abdominal cavity, it is often found that the diuretics we give do not act well. But if the patient be tapped, and the distension of the abdomen removed by the withdrawal of fluid, the kidneys resume their function and secrete abundantly, in all probability because the pressure on the ureters, which previously hindered their secretion, is now gone.

Hydragogue cathartics also aid the action of diuretics, but what the exact *modus operandi* is I am not prepared to say, but I think it not improbable that they may act by relieving the congestion of the liver. When the liver is congested, it will more or less press on the vena cava, and the slightly increased resistance may partly impede the flow of blood from the renal veins. This will cause increased resistance in the capillary plexus of the kidney, distension of the efferent and compression of the afferent vessels of the glomeruli, and consequently diminished flow of blood and less secretion of urine.

The addition of a little mercury in the shape of blue pill to digitalis and squill is found greatly to add to their efficacy, and the cause of this may be the action of mercury on the liver.

The uses for which diuretics are employed are—

1. To remove fluid from the body when it has accumulated in the cellular tissue causing œdema, or in the serous cavities causing dropsy.

These conditions depend on, 1st, venous congestion, such as is consequent on valvular disease of the heart, allowing regurgitation and dilatation of the right heart, in consequence of emphysema; or disease of the liver, causing pressure on the portal veins.

The second cause is disease of the kidneys themselves. In this case the œdema is more apt to show itself first in the eyelids and scrotum, or wherever there is loose cellular tissue; while in œdema from heart disease it is more likely to be in the feet and legs, while the eyelids and scrotum may be free.

The diuretics we use in heart disease are chiefly digitalis and squill, although much benefit is often derived from associating these with bitartrate of potash and also a little blue pill.

In dropsy depending on the liver we may use mercury more reely along with squill and bitartrate of potash. Digitalis in such cases has not such a beneficial action as in cases depending on heart disease. In dropsy from disease of the kidneys we generally try to relieve these organs as much as possible by diaphoretics and purgatives, but we also use potash, broom, digitalis, squill, and copaiba.

In the second place, diuretics are used to increase the secretion of urine, and thus diminish its irritant qualities when the bladder or urethra are inflamed. For this purpose alkalies and copaiba are used, the latter having both a diuretic action and a healing power over the inflamed mucous membranes themselves.

In the fourth place, they are used to prevent the urine from becoming too concentrated, and depositing calculi in the bladder.

In the fifth place, they are employed to eliminate the products of waste.

For this purpose water itself is an excellent diuretic, and many people suffer from not employing it sufficiently. A very gouty old gentleman once told me that by two methods he had succeeded in warding off an attack of gout for a long time. The first of these was to drink a large quantity of water in the morning. 'For little water,' said he, 'is a great cause of gout;' and whenever you get a gouty patient in the upper ranks of life, always ask him how much water he drinks. You will generally find that they take a small cup of tea in the morning, and a small cup of coffee in the evening. This is all the water they take except what they get in the shape of wine, beer, or brandy and soda—water pure and simple many of them never touch. In such persons gout may often be warded off by washing out their tissues with a large draught of water in the morning, and making them drink more water and less wine at meals. But if this is not enough, and the gout still threatens, give them twenty grains of nitrate and thirty of bicarbonate in a large tumbler of water.

In this way we get rid of the products of nitrogenous waste which are supposed to produce gout.

But this brings us to the question, do the kidneys secrete urea or not, or is the condition which occurs in advanced disease of these organs, and termed uræmia, due to urea formed by them but not excreted.

Several attempts have been made to decide this point by examining the blood from the renal vessels, and comparing the amount of urea in the blood going to, with that returning from the kidney.

The great objection to these experiments is, that it is very difficult indeed to estimate the urea in blood with any degree of certainty.

But there is another method which has been followed by Rosenstein. He destroyed one kidney but left the other. If urea were formed by the kidneys the amount excreted should be diminished, but instead of this he found that it remained the same, and therefore concluded, and I think rightly, that urea is not formed in the kidneys.

For my part, I believe that it is formed partly in the liver and partly in the tissues, and that the chief agents in its formation are the ferments in the body which split up its albuminous constituents into urea, or some substances such as kreatin, &c., which yield it, and into some non-nitrogenous substances, such as glycogen, sugar, or fat. These are burnt up and excreted as carbonic acid and water, while the urea is passed out by the kidneys. In fevers this process goes on more rapidly, and the old treatment of fevers, and one still much used, is to give diuretics to get rid of the waste; but of late years we are gaining such knowledge of the action of such drugs as quinine and salicylic acid, as inclines us rather to attempt to arrest the decomposition of the tissues, and thus stop the fever which their oxidation causes, than simply to remove the products of their waste.

How much room there is for farther investigation into the action of drugs I think this paper will show, for, if I have tried to give you some idea of the mode of action of such a diuretic as digitalis, I have been obliged to tell you frankly that, regarding the mode of action of most of them, I know no more than you do, and come here in the expectation that some of you during the course of the discussion may very possibly light upon a reasonable explanation of what is still a puzzle to me.

March 2.

Sheehy showed—1. Bony mass within the eyeball. 2.
n body within the eyeball. 3. A glaucomatous cup.

R. Bruce read the notes of a case of "Diaphragmatic
" that terminated fatally.

Vernon read a paper on the antiseptic treatment.

March 9.

Macready read the notes of a case of cancerous stricture
Sigmoid flexure.

Reid showed an improved form of suppository tube.

Ormerod read a paper on "Thoracic Aneurysm."

THE

BERNETHIAN SOCIETY

ST. BARTHOLOMEW'S HOSPITAL.

EPORT OF PROCEEDINGS.

SESSION 1876-77.

LONDON:
SMITH, ELDER, & CO., 15 WATERLOO PLACE.
1877.

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ABERNETHIAN SOCIETY having determined in Special Meet-
it was advisable to publish a Report of its Proceedings,
ed a Committee to carry the project into effect. The Com-
herefore drew up the following Rules, which were accepted
Society at the General Meeting :—

With the approval of the Editors (of the Hospital Reports), that the Proceedings of the Society should be published in the Hospital Reports as heretofore, but in more detailed form, and that afterwards reprints should be thrown off for distribution among its Members.

That the papers for publication be selected by a Committee consisting of the two Presidents, two Vice-Presidents, two Hon. Secretaries, and the Hon. Treasurer.

That the reprints shall be stitched in the form of a pamphlet, and shall contain a complete List of the Members of the Society for the last five years, and a Table of Contents shall also be provided, with a printed cover.

That copies be distributed, free of charge, to Members who are not of more than five years' standing, and that those of more than five years' standing may obtain copies on payment of one shilling each.

That these Rules be also printed in each copy of the Proceedings for the information of Members.

SESSION 1876-77.

◆

OFFICERS.

residents—MR. KEETLEY AND MR. MACREADY.

ice-Presidents—DR. WHARRY AND MR. MILLS.

orary Secretaries—MR. PYE AND MR. DARBISHIRE.

ENTLEMEN WHO HAVE BECOME MEMBERS OF THE SOCIETY DURING THE PAST FIVE YEARS.

2-73.
. G.
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I.
W.
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V.
. F.
.
H.
).
. E.
.
.
W.
J.
.
. A.

Pooley, W. M.
Roeckel, W.
Rule, G. H.
Russell, J.
Sheehy, W. H. P.
Sloman, H.
Smith, G.
Steavenson, W. E.
Ward, A. G.
West, S. H.
Williams, A. G.
Williams, J. W.

1873-74.

Carcenac, E.
Edwards, A. E.
Farrington, D. W.
Ferrand, C.
Glyn, H. A.
Hames, G. H.
Hart, N.
Heath, W. L.
Hepburn, A.
Hindle, G. R.
Howat, G.
Hutton, E. R.
Jackman, G. F.
Keetley, C. R. B.
Little, H. S.
Lucas, H. O.
Malden, F.
Peacey, W.
Peevor, H.
Prosser, T. G.
Pye, W.
Ranking, G. S. A.
Robertson, F. F. A.
Schofield, R. H. A.
Shoolbred, W. A.
Smith, Gerald.
Spooner, F. H.
Thomas, J. R.
Watts, F.
Wharry, R.
Wilmot, J.

1874-75.

Abercrombie, J.
Adams, J.
Bamber, C. J.
Bateman, A. G.
Calcott, J. B.
Campbell, J. M.
Chapman, H. F.
Clarke, W. Bruce.
Collingridge, W.
Cripps, E. C.
Dennys, G. W. P.
Dingley, A.
Edmunds, R.
Edwards, F. S.
Eve, F. S.
Gabb, C. B.
Good, F. T.
Kidd, P.
Lyons, Isidor.
Paget, G. E.
Patterson, G. H.
Roughton, J. W.
Thurland, F. E.
Waylen, S. A.
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1875-76.

Adams, A. P.
Anderson, A.
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Baker, W. J.
Baker, W. T.
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Blakeney, H. F. B.
Bradford, A. S.
Bradshaw, J. D.
Bruce, R
Burgess, W.
Burlton, A. H.
Colenso, R. J.
Craddock, F.
Craven, R.
Cumming, R. F.
Cuthbert, C.
Cuthbert, W.
Dingle, W. A.
Dixon, G.
Falkner, J.
Gayton, F. C.
Gaze.
Gill, R.
Gipps.
Hart, A. P.
Hasleden, R.
Hooker, C.
Johnson, G.
Kirsopp, T.
Langdon, J. W.
Lewis, T. H.
Lillies, H.
Lockwood, C. B.
M'Kee, G.
Mackrell, A. S.
Morse, E.
Moullin, N. M.
Paulley, J.
Plumbe.
Prowse, A. S. W.
Redmayne, R.
Steele, H. F.
Sugden, D. A.
Tait, E. S.
Taylor, W. C. E.
Townshend, K.
Trevan.
Webb.
West, E. de L.
West, W. F.
Wharry, A. J.
Whitley, C.
Wickham, W.
Woodward, F.

1876-77.

Barratt.
Clark, A. N.
Clarke, C. D.
Coles.
Cooke.
Dismore.
Dumbleton.
Gabriel.
Griffiths.
Harbrook.
Hayward.
Hoekin.
Jackson.
Jolliffe.
Krouk.
Langton.
Liddell.
Maude.
Meade.
Meadon.
Morgan.
Nall.
Nicholson.
Nicoll.
Oakley, A.
Oakley, H.
Ogle.
Payne.
Pearless.
Prickett.
Pycock.
Richardson.
Rowsall.
Shears.
Shephard.
Smith.
Sylvester.
Waldo.
Walters.
Wells.

PROCEEDINGS

OF

THE ABERNETHIAN SOCIETY

FOR WINTER SESSION 1876–77.

October 12, 1876.

Dr. Gee delivered the introductory address, which is here given *in extenso.*

This evening we celebrate the opening of the forty-fourth session of the Abernethian Society by the usual introductory address. On referring to Dr. Coomb's historical sketch (Hos. Reps. vol. iv.) of our Society, I find that the first introductory address was given by Sir James Paget in 1844. But no doubt many of you know that, although this Society has borne Abernethy's name since 1832, it was founded long before, by Abernethy, in 1795, under the name of the Medical and Philosophical Society of St. Bartholomew's. So that ours is one of the oldest scientific societies in London.

The most obvious purpose of a scientific society, I suppose, is the getting of truth: ours is a medical society, and our object is medical truth. Now it seems to me that medical societies may be of two kinds. First, there may be societies of men who are no longer students in the common sense of the word—men who know what is already known, and whose object is the winning of new truth out of the boundless world of the unknown. Next, there may be societies of men who are still students, commonly so called—men whose business is not so much to discover new truth as to make themselves master of the old.

The Abernethian Society, whatever it may formerly have been, is now of the second kind rather than the first; that is to say, it consists in greater part of students, from whom we do not expect truths absolutely new, so much as truths which are relatively new—truths which are new to most of the hearers, or old truths arranged in a new fashion. The papers which are read here are almost always, and almost necessarily, of this kind. We are not ashamed here of old truths. We welcome the new, but, as I said before, we do not much expect them; for, in Milton's words, 'Our wings here are fledging; we may meditate a future flight, but our Pegasus soars as yet on feeble pinions.'

Our wings, our Pegasus. I have hinted, before I meant it, at another, and indeed at the chief, use of our Society. Hereafter I will speak of this topic more at large, but let me say now, that if the Abernethian Society did nothing more than scatter a few truths abroad, it would have small reason to show for its existence. But ours is a dialectic society. We discuss the papers we read; we question, doubt, deny; we look at a reputed truth, whether new or old, from all points of view; we confront it with contrary and contradictory truths; and in doing so we strengthen the very spirit of truth itself. Under this discipline our wings grow strong, and our Pegasus comes to soar on pinions which carry him up to the very sun of truth. But more of this hereafter.

Let me resume the earlier part of my discourse relating to the papers we read and the specimens we show at our meetings. The profit of the papers read here is great, both to the reader and the hearers. A good paper collects truths from all times and all countries; but this is not all; greater still is the profit and the pleasure which we find in beginning or renewing an acquaintance with the great minds who have made medicine what it is. We do not read Hippocrates only for the sake of the isolated truths we learn from him. That were scarcely worth the pains. The mark of a book, written by a man of genius such as he, is that it cherishes our own spirit of truth; we seem to breathe the very air of truth; he inspires us; and as long as we feel his influence we are raised above our ordinary selves. I appeal to those who are listening to me whether this is not so. Our own love of truth vibrates in unison with the master's tones, and this power of awakening the slumbering faculties of men is the gift of genius. He is the genius, emphatically so called, who discovers the same faculty in his fellows. For what is genius? In the words of a member of our own profession, which I have been so bold as to adapt to the present occasion—

'For genius, bearing out of other worlds
New freights of thought from fresh-discovered mines,
Is but reciprocated love of truth.
Witness Hippocrates, our guardian angel;
Harvey, whose thought created man anew;
And Auenbrugger, poor neglected seer,
Who, like a moon, attracted naturally,
Kept circling round the central sun of truth.'

Let me then exhort you who read with the purpose of making ready a paper for this Society, above all things to choose out books of genius. You will have enough to read which (even if truth) cannot be called genius in the sense we have spoken of before. And such reading is not unprofitable in its way; but it must not shut out reading which is far more profitable. To give an instance of what I mean. It is very well to read the periodical journals of the day, and you will profit by the reading; but it would be a sad mistake to allow such reading, as it easily may, to leave us no time for looking up our Hippocrates, Sydenham, and Læennec. It is the old strife between the letter and the spirit. A truth is good, but the truth is our chiefest good. To possess truth is good, it is much better to be possessed by truth.

He, then, who would earn the name of a man learned in his art and mystery, must first of all ponder what Hippocrates has left us. Medicine begins with him. No doubt medicine has existed as long as man, and curious antiquarians find traces of it in the oldest records, Egyptian or Indian. We may compare medicine, as Celsus does, to finding food. Truly food and physic are the most immediate necessities of man. Nay, even the gorilla practises medicine, so we are told by Livingstone; but the science begins with Hippocrates. He laid its foundations deep and wide, deep and wide enough to last for ever. Of this there is proof in the remarkable fact that many men of all ages, even down to the present day, who have most deserved the name of good physicians, have taken the greatest interest in exploring the method which Hippocrates followed. For in all human knowledge the question of method must come first. The nature and scope of our understanding, the order of its operations, and the fundamental law which regulates them, these are surely worthy subjects of thought. Now the method of Hippocrates is not hard to discover. He is an empiric in the original sense of the word. In the books of Epidemics we see the first stage of his process. He collects the histories of as many patients as possible; and we may say that these histories are models of case-taking, and well worthy the study of those whose duty is to be good clinical clerks and registrars. The simple truthfulness of the old Greek's notes is delightful. In the next stage he proceeds by what we now call logical induction from these particulars to universals, and the greater part of the other books of Hippocrates is made up of these universal propositions. But the word 'universal' has a relative meaning, admitting of less and more. Now in making universals more and more extensive, they become at last too abstract to be useful. It is here that Hippocrates shows his judgment. He is great in what Bacon calls middle propositions. I refer to that well-known passage in the 'Advancement of Learning' where he says, 'Plato, in his "Theætetus," noteth well that particulars are infinite, and the higher generalities give no sufficient direction; and that the pith of all sciences, which maketh the artsman differ from the inexpert, is in the middle propositions, which in every particular knowledge are taken from tradition and experience.' The middle propositions which Bacon speaks of are, in other words, universal propositions which have not ceased to be useful in particular cases. And I have somewhere met with a saying of Cabanis to this effect. 'Hippocrates shows that he is on his guard both against those hasty views which generalise from insufficient data, and also against that impotence of mind which is not able to perceive the relation between things, and so drags on after particulars, without result, for ever.'

The result of this Hippocratic method is aphorisms, pithy sayings complete in themselves. The book of Prognostics and the book of Aphorisms consist entirely of such precise and independent propositions. And let me try to prove to you that the Hippocratic method is the true method in the words of Littré, the famous editor of Hippocrates, disciple of Comte and lexicographer. 'In all sciences the starting-point is the facts of experience. In some sciences the experimental basis is very small, and yet supports a superstructure of immense extent; such are the mathematics. But in proportion as we leave these sciences, which are almost pure, so increases the complication of the experimental conditions, and this complication becomes excessive in physiology, and in medicine which depends on it. It is in medicine especially that we have to guard against the drawing-on of induction and the temptation to logic. The anticipations of reasoning are here most at fault; here it is that all the artifices which the human mind has devised for passing from the known to the unknown are of least avail; and, in one word, here it is that facts have most authority, and reasoning least, inasmuch as our science consists not in the infinite development of a few fundamental axioms, but in the more or less advanced co-ordination of innumerable particulars.' Those who have gone through the process will agree with me that the deducing of true and useful aphorisms from a multitude of particular instances is no easy task. In fact, the last stage of the Hippocratic method is always in danger of being left unfulfilled by reason of the heap of facts which a man accumulates around him ; mere baggage, impedimenta, or raw material of no worth whatever, unless it have passed through the workshop of the mind. We all become overloaded with notes of cases, burdening our drawers and pigeon-holes, and which we have not time enough to smelt, as it were, into useful metal.

And this intellectual smelting is a great toil. Sydenham has told us what his treatise on Gout cost him.

'I send you a short tract upon gout and dropsy, instead of the thicker volume which, in my mind, I had determined on, namely, a history of such chronic diseases as my practice has most especially met with. By applying my mind, however, to its utmost, and bringing all my powers of thought to bear upon the subject, I incurred a fit of gout, such as I had never before suffered from; so that the fact itself warned me to lay aside, even against my own will, such lucubrations, and to take care of myself, well satisfied with having, in some measure, dealt with these two diseases. Whenever I returned to my studies the gout returned to me.'

> '’Mid the wreck of *is* and *was*,
> Things incomplete and purposes betrayed
> Make sadder transits o'er thought's optic glass
> Than noblest objects utterly decayed.'

And here Hippocrates stops short. His method having provided him with useful aphorisms, he goes no further. He may arrange his aphorisms under sundry heads, those which relate to ætiology, prognosis, or therapeutics; those which relate to diseases of the head or other parts; those which relate to this symptom or that, and so forth; but he is too wise to enter upon a third stage, and to construct a system. And what is system? It is an attempt to introduce the method which is opposed to that which has brought us so far safely; system is syllogistic and not inductive ; it attempts to explain things, to show us the why and wherefore, to deduce facts from principles, particulars from universals; it tries to make knowledge look as if it approached perfection. If system delude us into the notion that it can give us aphorisms, or principles useful in practice, system is an evil which cannot be denounced too strongly.

The only use of system is to serve as an intellectual gymnastic; but even in this way, applied to so practical a knowledge as medicine, it may be highly dangerous, through our mistaking the phantoms of system for the truths of induction.

In sciences which are purely speculative, system may be carried to the highest degree; and a great delight it is to see how man's mind can create a speculative universe alongside of that which exists independently of us. Take Spinoza's ethics as an instance of what I mean. But between Spinoza's universe and the real world of things is a great gulf fixed, not bridged over, so far as I can see, in one single spot. And thus the danger of mistaking pure imagination for reality is less than when the propositions of syllogism and induction are mingled. And from this mingling the Hippocratic method is wholly free. It gives us inductions pure, detached, isolated—inexplicable they may be, but they are true. They relate to life and work. But system is mere intellectual sport—

'And tired with systems, each in its degree
Substantial, and each crumbling in its turn,
Let us build systems of our own, and smile
At the fond work, demolished by a touch.'

Did time allow I should be greatly pleased to unfold this doctrine of the Hippocratic method yet more. I should like to examine the work on Ancient Medicine along with you, and to show how the polemics which Hippocrates directs against the dogmatists of his day might be revived against the dogmatists of our day, especially the chemists and physiologists. With the work on Airs, Waters, and Places for our text-book, we might discuss the topics of ætiology, hygienics, and prophylactics. The book on Prognostics and on Regimen in Acute Diseases would guide us in a search for the principles of therapeutics. These are some of the things which the father of physic will teach us, and I am glad to believe that ours is not more an Abernethian than a Hippocratic society.

Next to Hippocrates in respect to time comes Celsus. His merits are very different from those of Hippocrates. Celsus is not a genius; his work is so largely compiled from the writings of others, that some critics have thought that it is nothing but a compilation. But it is this very thing which makes Celsus' book so valuable as it is. He is supposed to have lived in the great Augustan age, four centuries at least after Hippocrates; and these were very busy centuries; in particular, the great Alexandrian school of medicine had flourished at that time. He refers to about eighty writers of medicine whose works are entirely lost; and, indeed if it were not for Celsus, we should not know how great had been the increase of medical knowledge since the days of Hippocrates. Celsus is characterised strongly by truthfulness, clearness, and good sense.

After Celsus it might be expected that I should say something concerning Galen, who lived in the reigns of the Antonines; but I confess I could never read him. It is all very well that he should write commentaries on Hippocrates, but he is far enough from possessing the Hippocratic spirit. He does not work by the Hippocratic method; he is almost more of a metaphysician than a physician, and his prolixity is great.

Even Aretæus, much as he has been praised, and much as he deserves to be read, shows a falling away from the principles of the great master, the 'divine old man,' as Sydenham calls him. Aretæus does not give us the aphoristic truths which are the life of medicine, but he draws striking pictures of diseases somewhat idealised. He reminds us of Dante and Spenser more than of Hippocrates; however, his fragmentary book leaves our art a step farther on the road than Celsus.

Cælius Aurelianus is the only other ancient whom I can recommend as being worthy your study: if you can read him; for his book is written in a most barbarous style, and would, I think, puzzle a man who might have spent ten years in reading Cicero. And unluckily he has never been translated, as he well deserves to be. I confess I have dipped into him only here and there, but I have found good things in him.

Paulus Ægineta's is a poor performance. However, it has been translated, and so is worth keeping on one's shelf as a monument of what medicine was about the time of the overthrow of the Western Empire.

You may think that I speak of a long course of reading; but, my friends, take courage; the next ten centuries will give you a vacation of study.

> 'See Christians, Jews, one heavy sabbath keep,
> And all the Western world believe and sleep.'

But let us not be too hard even upon the dark ages. In the twelfth century a work was done which has had great results for us. The foundation of St. Bartholomew's indeed consisted at first, as you know, of two parts: one monastic, temporary, suitable perhaps to the time, but which (it was written in the book of fate) should not endure, and which died out, utterly corrupt, four centuries after the days of Rayer; the other part, medical, abiding, necessary to all ages, and which has gone from strength to strength, until it has become the great hospital and school of medicine in which we all feel the deep satisfaction which words are poor to express.

The first effect of the revival of learning in the fifteenth century seemed, so far as medicine was concerned, to be a kind of deification of the ancients. Hippocrates and Galen were supposed to be not less infallible than the Pope of Rome. A remarkable instance of the truth of what I say is found in the annals of the College of Physicians.

It stands thus in the annals :—

'December 22, 1559.—It has been notified to John Geynes, otherwise a man well behaved and not imprudent, that within one month he make known to the College in writing all those passages concerning which he was not ashamed to say in public and before the learned, and even in the presence of the whole College assembled in its usual committees, that Galen has erred.'

'1560.—Last year, in the month of December, John Geynes was commanded to bring forward all those passages concerning which he was wont publicly to say that Galen had erred, according to the testimony of that worthy man, Thomas Wendy, Physician to the Queen, and even of Geynes himself, openly saying so before the whole College. But when he had refused, the Sheriff of London, by order of the President of the College, compelled him to hold forth or go to gaol.

'When, however, Geynes refused to defend his cause, and clearly perceived that he, and not Galen, was wrong, he honourably gave himself up, and acknowledged his fault; he lamented that he had propounded blunders, that he had not been more circumspect, that he had not pondered the passages of Galen more carefully, that he had not sought out Galen's meaning, that he had not understood Galen's opinion, that he had not quoted Galen's words faithfully, that he had not shown due respect to Galen, and had accused him falsely.

'Which he also confirmed by his subscription in the following words: "I, John Geynes, confess that Galen has not erred in those things which I alleged against him."'

This event is but a flicker in the socket of a dying taper: the days of Galen were numbered and finished. The kingdom was about to be taken from dogma and given to dialectics. Galen was soon to be weighed in the balances and found wanting.

William Harvey was born in 1578, or less than twenty years after Geynes' trial for heresy. The discovery of the circulation of the blood was a deadly wound to authority and Galen. The Hippocratic spirit soon revived.

I have looked into a few of the most famous books on physic written at the end of the sixteenth and beginning of the seventeenth centuries, before Harvey's discovery, particularly into Fernelius, Mercurialis, and Ballonius, and I found that the new epoch had not yet begun. The full influence of Harvey and free-thinking is not felt in medicine until we come to Thomas Sydenham, who was born in 1624. But I will briefly refer to two English physicians who were somewhat older than Sydenham, and whose writings are not yet forgotten. I mean Francis Glisson and Thomas Willis. Glisson was the discoverer of rickets; Willis discovered saccharine diabetes.

And here I hope you will pardon me if I indulge in a short digression suggested by the name of Willis. I wish to say a few words upon the manner in which we should read these old books. I think you will admit that it is a sound principle of interpretation which Fichte lays down in his sixth lecture on the Doctrine of Religion: 'So to understand these writers as if they had indeed wished to say something, and, so far as their words permitted, as if they had said what was right and true,—a principle which seems to agree with justice and fairness.' Let me illustrate this principle by an example.

Willis talks much of the vital and animal spirits. I confess that at first these terms do not convey any idea. We feel disposed to pass them over with charitable pity for a man who had nothing more real to write about. Yet he would be a rash man who would dare to say that Willis and Sydenham were guilty of using words full of sound but signifying nothing. The Animal Spirits. First of the Spirits. The Latin *spiritus*, a word originally meaning breeze or breath, grew in comprehensiveness until at length spirit and energy of any kind came to be synonymous. The same is true of the corresponding Greek word *pneuma*, and also (so Spinoza tells us in the first chapter of his Theologico-Political Treatise) of the Hebrew word *ruagh*. Spirits then mean energy. And next of the qualification, Animal. In Galen's system, the animal constitution is defined to be that which is derived from the brain, through the nerves, to the organs of sense and motion. This is enough, the animal spirits signify the energies of the nervous system; and if in later times men have talked first of nervous fluid and then of nervous force, I doubt that they have not done much more than change the names of things. Again, the animal spirits are truly said to be formed from the vital spirits. By the vital constitution is meant the whole sanguifying and sanguineous system. Then the vital spirits are the energies and forces of the blood. The vital spirits became transformed into the animal spirits; or, in modern phrase, the energies of the nervous system are derived from the energies of the blood.

Now we who within the last forty years have become familiar with the speculations of Mayer, Joule, Grove, and others, respecting the mutability and eternity of energy, will have no difficulty in confessing this doctrine, although most likely we may be at first astonished to find it current three centuries ago.

Let these examples suffice. When we read old authors, we must be quite sure that we understand them before we judge them. The meaning of words is continually shifting, and we must resist their tyranny.

In Sydenham, the Hippocratic spirit fairly arises above the horizon once more. The increase of medical knowledge in the last two centuries has been immense, oppressive. It sometimes provokes a feeling of the deepest sadness. Who is sufficient for these things? Our life is too short; scarcely do we begin to understand a little, scarcely do our powers of discerning and judging become ripened, than we go hence and are no more seen. 'And I gave my heart to know wisdom: but I perceived that this also is vexation of spirit. For in much wisdom is much grief; and he that increaseth knowledge, increaseth sorrow.'

Do you remember the famous story told of Antoine Arnauld, whose friend asked him whether he rested not sometimes. 'Rest!' he answered, 'have I not an eternity to rest in?' My friends, let us console ourselves with the thought that we have an eternity to work in.

The strong desire which we feel to live for ever, our longing to become more and more like the Eternal, our conviction of aptitude for eternity, belie the appearances of death. This present life is our infancy, in which we make a few first steps; feeble steps perhaps, but woe to him who neglects his calling here! Can he who is faithless in these few things expect to be made ruler over the many things which we look forward to in a life to come? What must happen to those who fling away their birthright of opportunity, we do not know.

Sydenham's writings are of unequal value. The books he published last are by far the best. I will not go into details; I will only say he marks a reformation in medicine.

After Sydenham's time we meet with no more books written in the old scholastic manner, like those of Glisson and Willis. And what we may call the Sydenhamian or revived Hippocratic school flourished down to the end of the last century.

A contemporary of Sydenham was Richard Morton, who published three books of great worth shortly before his death at the end of the seventeenth century. One book on diseases accompanied by Atrophy, the other two are on Fevers. They are quite Hippocratic.

Richard Mead, William Heberden, George Baker, John Fothergill, Robert Whytt, Francis Home, William Withering, David Pitcairne, James Currie, Edward Jenner, these are the chief English names in medicine during the last century, and the same spirit pervades them all.

In Italy, Baglivi, Lancisi, Torti, and Borsieri; in France, Vieussens, Senac, and Bordeu, worked by the same method.

In Holland, Hermann Boerhaave appeared, a sort of modern Galen, bearing much the same relation to Sydenham that Galen did to Hippocrates, who wielded an authority during his lifetime not much less than that which so long belonged to Galen. They say that Boerhaave used to take off his hat when he spoke of Sydenham; but he was not a true disciple of Hippocrates or Sydenham. He invented a system of pathology which, like all our little systems, had its day; it had its day, and ceased to be. There was not in it life of truth enough to keep it sweet and sound, and few are those nowadays who read Boerhaave.

Boerhaave's praise is the men who were his pupils. First of all, Albert Haller. Next, Gerard van Swieten and Antony de Haen. These latter two men were persuaded by Maria Theresa to settle in Vienna, in order to revive the school of medicine there; and their scholar, Maximilian Stoll, was greater than either of his masters. And so the eighteenth century came to an end.

But I have not yet spoken of the two men of that century who had the greatest influence upon medicine; John Baptist Morgagni and Leopold Auenbrugger. Hippocrates marks an epoch; so do Harvey and Sydenham; and also Morgagni and Auenbrugger. The year 1761 is a year much to be remembered in the history of medicine. In that year Morgagni, eighty years old, published his book on the seats and causes of diseases: this was the beginning of morbid anatomy. In that year Auenbrugger published his book on percussion of the chest: this was the beginning of the art of examining the deeply-seated organs during life. The only year which can compare in fame with 1761 is 1628, the year of Harvey's book.

The men of whom I henceforth have to speak lived under these new influences. I will mention the dead only. In our own country we celebrate Matthew Baillie, Robert Willan, John Blackall, William Charles Wells, Richard Bright, Thomas Addison, Thomas Hodgkin, Robert James Graves, John Abercrombie, Peter Mere Latham, Robert Gooch, and Marshall Hall. But the French school of medicine was the most famous of the first thirty or forty years of the present century. Corvisart, Bayle, above all Laennec, Broussais, Piorry, Bretonneau, Cruveilhier, Andral, Louis, Trousseau, Rilliet, and, last of all, although by no means the man whose fame will be the least, Duchenne. The Germans have worked well at physiology and microscopical anatomy, but I will not shrink from declaring my opinion that to medicine they have added very much less than the English or the French. The discovery of the ophthalmoscope by Helmholtz, and of the laryngoscope by Czermak, is their greatest praise. For my own part, I do not rate German medical books very highly. It may be a fault or failing of mine; but, to speak plainly, they are not to my taste. Time was when I followed the example of the many, and supposed that the secret of science was in Germany. I read many of their books with an honest intent, but I came to see that, for the most part, they were pervaded by two faults. The first fault was that syllogistic spirit of system which has led many of their best writers to think out over their desk symptoms of disease and methods of treatment, which the spirit of truth at the bed-side will not acknowledge. The other fault was the endeavour to say all that can be said, forgetful that there is a proportion between facts as between everything else, and that some facts are of great value, and others of little or none at all. This is a very old defect of the Germans. Montaigne alludes to it when he says, 'The Germans drink almost indifferently of all wines and liquors with delight; their business is to pour down and not to taste.'

I have now finished my historical sketch. I have spoken much of books, and I have no fears that any one of my hearers will cry down book-learning. Study and experience in medicine are sometimes opposed to each other, especially by men who usurp the name of practical. Experience is indeed the source of knowledge in medicine; but experience alone is of small worth; it is merely unwrought material. A man may pass through life with a very large experience, and yet with very little increase of knowledge. Experience without study profiteth nothing. You see a patient, you examine him as carefully as possible, you note down the details of his case, you ponder it, you compare it with other cases which you have recorded; this is the only kind of experience which deserves the name. And can we suppose that these methods of studious thought will not be carried out best by him who bears the best models in his heart? Is not the experience of that man likely to be the best who is fresh from the inspiration of the great prophets of medicine? Our book-learning will raise us common men above ourselves; we too shall see in part with the eyes of Hippocrates and Laennec. Let me take an instance of what I mean from another art. During the last great French-German war, Count von Moltke is said to have given it as his opinion that the

Algerian training of so many of the French generals was a bad training, because it led them to despise the rules drawn from the practice of the great masters of the art, and because it encouraged them in relying upon mere expedients of the hour. If this were the conduct of the French, they were condemned beforehand by a greater soldier than Von Moltke. Napoleon Buonaparte was talking with his generals one evening at Dahme, near Dresden, when the loss of the battle of Dennewitz by Ney caused the Emperor to speak of the difficulty of making successful war. Marshal St. Cyr declared that it was very doubtful whether the longest experience was indeed the best school for learning the art of war, and that of all the generals, French, Russian, Austrian, or Prussian, who had been at the head of the armies of Europe since the Revolution, not one, not even the Emperor himself, had gained by experience. And Buonaparte did not hesitate to confirm this remarkable opinion. He said that his first campaign in Italy was his masterpiece of war, and that he knew only one general who had profited by experience, and that was Turenne, whose great ability was the result of great study.

Let me now resume the topic at which I hinted in the beginning of my address. The Abernethian Society is a discussion society, and this is its chief use. For discussion is the great means of developing the spirit of truth which is within each one of us. Our faculty of discerning truth and falsehood underlies all logic, ratiocinative or inductive. Logic does but put in order the material which our faculty of truth is to judge. The simplest syllogism appeals to and presupposes this faculty. This is the essence of man, that which makes man man, that which distinguishes man from the beast. This is the dæmon of Socrates, the ruling part of Antoninus, and, if I may say so, it is the Word of God. *The* truth as distinguished from truths. Truth is in us all, but in us all is more or less obscured by the mists of passion. And passion is desire—desire of reputation, riches, or pleasure. Truth and passion are contradictory; they are the good and evil deity of man. We must choose between them; we cannot serve two masters; and if with us our *summum bonum* be to attain the full development of our nature, that is to say, to attain to a substantial union with truth (according to that sublime prayer of Thomas à Kempis, 'O Veritas Deus, fac me unum tecum in caritate perpetua'), if this be our aim, then we reach it only by casting out the great adversary, passion, which strives to drag us down below our nature. In a society such as this, desire of reputation is the passion most likely to be felt, and a discussion society will help us to subjugate it. How far short soever we may fall of our ideal, we know that we ought to come to our meetings here saying in our hearts, 'My object is truth; to develop my own nature, and to help my brethren in developing theirs. The only reputation which I seek is that of being devoted to the truth. Men cannot praise the sharpness of my wits, and be it so; but in devotion to the service of my proper nature I need be second to none.'

Gentlemen, such thoughts as these open up the whole field not only of knowledge but also of morals; indeed, from our present point of view, truth and goodness blend. But I must draw to an end by reminding many of you that the Abernethian Society will probably afford you the only opportunity which you will have in your life of cultivating your powers in the way I have spoken of, namely, by discussion. I invite you all to join it; I would even urge you all to join it, because I am confident that you will find it to be for your good. Your student-days here are few; soon you will have to go out into the world to *do* the truth which here you have learned, and it behoves you to have your sinews well knit, and your weapons well proven before you engage in the great warfare against falsehood and ignorance, evil and disease. In the name of Saint Bartholomew's Hospital I tell you that it is expected that every man of ours will do his duty.

October 19.

Dr. Maberly showed an old form of pessary which had remained in the vagina for twenty-six years. The patient on applying for relief denied all knowledge of the presence of the foreign body, which was firmly impacted; removal was effected under chloroform by Dr. Godson.

The pessary was disc-shaped, and had to be split before removal.

Mr. Keetley read a paper on 'Some Points in the Treatment of Fractures.'

October 26.

Dr. Wharry showed a specimen of carcinoma of stomach.

Dr. Moore showed a specimen of gastric ulcer, with stricture of the pylorus, probably cancerous.

Dr. Maberly showed a specimen of hypertrophied clitoris, which had been removed by the écraseur.

Mr. Darbishire read a paper on 'The Treatment of Wounds.'

He pointed out the necessity of looking to the facts of the general behaviour of wounds in order to recognise a rational system of their treatment. By observation the surgeon learned that those wounds which were not exposed to the air, and from which there was a free escape for all dead tissue, healed up most quickly and with least constitutional disturbance, therefore with less danger to the patient. He explained the constitutional disturbance by the early decomposition of the dead tissues, insisting that by the first chemical changes in the direction of decomposition, its most poisonous substances were formed. A free drainage was the most essential point in the treatment of a wound, for if that was intelligently arranged, then there was no need for antiseptics; the wound would keep healthy of itself.

As to the antiseptic method, it was of no use where a free drainage could be kept up from the wound; it might be of advantage when that was not the case, but only then. Every method or system of treatment was bad except the rational treatment which looked upon every wound as an individual to be treated (upon sound principles) according to its surroundings.

After a few words on the excellence of the practice of drainage as applied to wounds, the paper closed.

November 2.

Dr. Wharry showed a specimen of malignant disease of the kidney, with the lungs and portions of the intestine from the same patient.

The interest of this case lay in the fact that the disease had lasted fourteen years, and in the absence of symptoms pointing to active mischief in the lungs or bowel.

Mr. Pye showed two specimens of abdominal aneurysm, and read the notes of the cases.

Mr. Benton read notes of another case of abdominal aneurysm.

Dr. Wharry read a paper on the 'Use of Sleep in the Treatment of Hospital Patients.' Three types of sleep were distinguished : the hyperæmic, anæmic, and toxæmic. Healthy sleep being due to slight degrees of cerebral anæmia, higher degrees produce insomnia, as in phthisis or delirium tremens. The characters and treatment of this form were pointed out. The use of stimulants on the one hand and narcotics on the other were condemned. Various means of producing sleep in patients whose insomnia is due to habit or mental excitement were discussed.

November 9.

Mr. Thomas read notes of case of fracture of the skull with hyperpyrexia, treated with temporary relief by the cold bath.

Mr. Bruce Clarke showed a dissection of a Colles' fracture.

Mr. Benton read a paper on 'Nurses and Nursing.'

November 16.

Mr. Pye showed a specimen of aneurysm of the arch of the aorta, with an aneurysmal dilatation of the arteria innominata; he also showed a specimen of internal strangulation of the small intestine, and read the notes of the case.

Mr. Griffiths read notes of a case of typhoid fever.

November 23.

Mr. Gabb read the notes of a case of œsophageal obstruction, for which gastrotomy was performed by Mr. Callender.

Dr. Wharry then read a paper on 'The Treatment of Cases in which Death appears Imminent.'

Sudden death.—It not rarely happens in cases of impending sudden death that there are a few moments in which something may be done with a hope of averting the calamity; if only one life in a thousand be thus preserved, it is sufficient reason for taking into consideration the treatment of sudden emergencies. Death seldom happens from syncope, asphyxia, or asthenia alone, and it is always necessary to form a just appreciation of the extent to which each of these factors is engaged in the fatal result.

Sudden death from aortic incompetence is by no means infrequent. When death does occur, it is almost instantaneous; the heart stops in an over-distended condition, and our only hope of averting death rests in rapid venesection. In rare instances death, depending upon asphyxia due to acute œdema of the lungs, has followed within an hour of paracentesis thoracis. Rapid withdrawal of the fluid from the pleural cavity causes an influx of blood to the pulmonary capillaries, and the blood being unable to obtain a sufficiently ready exit, acute œdema occurs, as evidenced by urgent dyspnœa, with albuminous expectoration, leading to death. Here again careful attention to the details of the operation is to be insisted upon. Evacuate the fluid slowly, always stopping temporarily when the patient coughs much. Carefully watch the pulse and administer brandy.

If death should threaten after a hemorrhage, the application of Esmarch's bandage to one or more of the limbs may possibly avert dissolution; but one must always guard against removing the bandage rapidly.

When death is threatening from coma, artificial respiration must be resorted to, and maintained with untiring perseverance so long as the heart is beating.

There are certain cases brought to the hospital by the police as drunk. They smell of spirits, and appear to be in

. condition resembling uræmic rather than alcoholic coma. This condition is due to excess of alcohol, with absence of food nd exposure to cold. As death sometimes occurs in this state, he treatment must be conducted with care. Wash the stomach ut, then inject some warm eggs and milk; apply a large mustard oultice to the chest and warmth to the surface generally. Avoid old douches, the galvanic battery, and emetics.

In all cases where death is imminent, any treatment adopted hould be resolutely carried out.

Mr. Bruce Clarke showed some microscopic specimens.

November 30.

Mr. Bruce Clarke read a paper on 'Some Points in the Treat- ient of Gonorrhœa.'

After alluding to the common character of this disease, the thor explained that his remarks would be limited to such ses as had come under his notice in the Surgery, together with e treatment employed.

After briefly discussing the pathology of the disease, the indi- tions for treatment were then laid down. Patients could e treated by diet alone, by local injection, by medicine, or by l three methods. The practical point to be solved, however, as how best to treat a fairly healthy patient, who either would t or could not lie up for a while.

The author was strongly in favour of the abortive treatment the premonitory stage. For this abortive treatment he used n injection either of nitrate of silver, gr. v., or tannic acid, . iii., coupled with a few drops of the tincture of opium to e ounce of water.

During the acute and subacute stages, especially the former, ere was but little to be done except to avoid doing harm by rong injections. Nothing more was to be desired than keeping en the bowels and washing away the irritating discharge.

Once the gleety stage was ushered in, active treatment might gain begin. The author spoke very highly of an injection of etate of zinc, gr. iv., tincture of catechu, m. viii., tincture of ium, m. viii. to the ounce of water.

The author stated his belief that the disease could be cut ort in the premonitory stage or in the gleety; but at the ute period treatment to an active extent was only deleterious. he results of treatment in over seventy cases were laid before e Society.

After briefly alluding to the chronic character of many gleets, eir relation to stricture, and the means to be taken for their cure, the author concluded by urging the use of opium as an adjunct to every injection.

December 7.

Mr. Pye showed a specimen of gall stones, consisting of nearly pure crystalline cholesterine.

Dr. Shuter read a paper on 'Obscure Abdominal Injuries.'

He held that those cases in which death occurs shortly after blows upon the epigastrium may be explained in one of two ways. Either there is paralysis of the heart, produced from the blows being communicated through the diaphragm, or there is so much injury done to the solar plexus, that the abdominal blood vessels become so dilated as to be capable of holding nearly all the blood, and that those patients die from anæmia of vital organs. By way of illustration he cited several cases that had come under his notice at St. Bartholomew's Hospital, besides the two cases recorded by Mr. George Pollock, and the one by Sir A. Cooper, where a man died on the spot, following a blow on the epigastrium. He then read notes of Mr. Willett's fatal case of ruptured bladder, and said he felt very strongly that in a case of the kind it was imperative to see it and make a diagnosis at once, and then immediately to open the abdomen and stitch the bladder up, the only positive sign being the capability of passing a sound into the abdomen far beyond the normal limits of the bladder. If the case was either not seen or not diagnosed for about two days, it was then too late to open the abdomen, for it would only make matters worse to do so when peritonitis had set in ; but that the patient should be kept entirely at rest, and have a soft catheter open at the tip passed several times a day to prevent the bladder becoming distended. Out of fifty-one cases that are on record, only three have recovered, and only one case of these three (Mr. Chaldecot's) had extravasation into the peritoneal cavity.

He then discussed ruptured diaphragm, and gave an account of a case which lived two days, and in which the stomach and transverse colon were found in the left pleural cavity.

After relating some cases of ruptured liver which had recovered, the rent being slight or subperitoneal, he recorded a case of a boy who lived four hours after being admitted to St. Bartholomew's Hospital with a ruptured stomach. The boy had the ordinary board-like hardness of the abdominal muscles, and complained of smarting in the abdomen after taking brandy.

Mr. Shuter showed how closely this case accorded with the symptoms of the one which Mr. Moore has placed on record.

The paper closed with a few suggestions in cases of ruptured intestines.

December 14.

Dr. Wharry showed a specimen of malignant disease of the bladder.

Mr. Adams read a paper on the 'Clinical Value of Alcohol.'

A brief account of the physiological action of alcohol was given, reference being made to Dr. Brunton's paper for a fuller discussion of the subject. Its use in collapse from injury, and in capillary bronchitis, and in allied diseases of children, was insisted on, while it was explained that its use in such cases was at least in part due to its preventing the necessity of the oxygenation of the blood. The use of alcohol in the pneumonia of adults, and in post-partum hemorrhage was then discussed. In pyæmia and septic diseases its use was explained from the results of physiological experiments on animals. The indications for its employment in typhoid and other continued fevers were given.

The uses of alcohol having been summed up, the subject of its abuse was entered into. To show that alcohol was not necessary for sustained exertion during health, Dr. Parkes' essay on the spirit ration in the Ashantee expedition was quoted, as also the experiences of the recent Arctic expedition, and Dr. Fothergill's writings. The loose and indiscriminate way in which alcoholic liquors are sometimes ordered by medical men was strongly condemned. Whisky was stated to be not so harmless a form of alcohol as is generally believed, on account of the frequency with which it contains fusel oil. The various merits and demerits of brandy, gin, rum, and absinthe were mentioned.

Total and sudden abstension from alcohol was held to be a perfectly safe procedure for habitual drinkers. The question of State regulation of the liquor traffic was then discussed. And in conclusion the importance of the subject, and the power for good or evil which the employment of alcohol placed in the hands of the medical profession, was urged on the notice of the Society.

January 11.

Dr. Brunton read a paper on 'Dyspepsia.'

He began by saying that the enjoyments of the incidents of life depended upon the judicious distribution of labour, rest, and relaxation; but when the relation between these becomes disturbed, life becomes filled with pain instead of pleasure. So with the stomach and its functions, if the supply of food is regular in quantity and good in quality, and the energy of the system is not interfered with in carrying out digestion, eating becomes a pleasure and digestion is no labour, but if anything prevents the just apportionment of these matters, nausea is felt instead of hunger, and comfort after a meal gives place to pain; in other words, we have dyspepsia. He then gave a short sketch of the growth of our knowledge of digestion; how the ancients thought that the food taken into the stomach was simply dissolved by moisture and warmth; how, later on, a kind of putrefaction was supposed to take place, or that the food was ground into pieces by the movements of the muscular walls of the stomach, like in the gizzard of a bird. It was not till 1840 that the digestion of food was finally attributed to the action of pepsin and the presence of hydrochloric acid. We owe a great deal of our knowledge of digestion to the observations of Dr. Beaumont on the Canadian, St. Martin, who had a gastric fistula. After describing several of these observations, the writer discussed the causes of the feeling of hunger, which he attributed, first, to a certain condition of the capillaries and lymphatics; secondly, to a condition of the system requiring for its relief absorption of food into the blood. He then touched upon the diagnostic value of the state of the tongue; first, the tongue with a thin white fur, going with a good appetite, and, in St. Martin's case, accompanied by excoriations on the mucous membrane of the stomach; secondly, the tongue with a yellowish fur, going with loss of appetite and deep red patches in the stomach; thirdly, the coated tongue, with no appetite and pustules on the gastric walls.

The writer then considered the causes of dyspepsia, the irritations of the stomach being divided into those caused by excessive quantity and by improper quality of food. A mild attack required a limited, bland regimen only; chronic dyspepsia is generally caused by a persistence of the causes of an acute attack, the best treatment being that by bicarbonate of soda combined with a vegetable bitter; atonic dyspepsia is due to a debility of the circulation and nerve apparatus, and must thus be treated, strychnine being a most useful drug for fulfilling this indication.

January 25.

Mr. Macready showed a dissection of a fracture in the neighbourhood of the ankle-joint with dislocation.

Dr. Verco read a paper on 'Delirium.'

Introduction.—One of the reasons that leads me to bring this subject before this honourable Society is, that it is one on which I have not been able to find anything like a full article in any of our medical text-books. True, one can cull not a little information respecting the matter in the shape of scattered fragments; but it is necessary to gather up these fragments if nothing is to be lost, and work them into a united whole. And this will not be found by any means useless for practical purposes.

It may be suggested that delirium is but a symptom, and not a disease, and that hence it was not to be expected that it should form the subject of any very elaborate treatise. But let it be remembered that what we as practitioners want, is not only to know the symptoms corresponding to a disease, but what are the diseases corresponding to a symptom. Patients always come to us complaining of a symptom, never of a disease; and, as physicians, we have from symptoms to discover their disease. To do this, one must know what are the chief diseases that can cause it, and from among these to choose out that one which is compatible with whatever other symptoms we may discover. Hence it is well to consider the symptoms of disease, each one separately, and to group around it the complaints which may be its cause.

Causes.—Delirium is but a symptom, nevertheless it has a very great many causes. There are many predisposing circumstances, which of themselves would never produce it, but yet bring about such a condition of system that delirium is more liable to occur.

And first of age: we all know how much more readily it arises in the young; how a child will be raving day and night with an attack of pneumonia that in an adult would cause no more than a little nocturnal wandering; and how at the onset of scarlet-fever the headache of the man is equivalent to smart delirium in the child. This is attributed to greater nervous impressibility, just as infantile predisposition to whooping-cough and other such affections is explained. We all recognise the greater liability, and as a consequence deem the delirium of children as not nearly so unfavourable, from the point of prognosis, as that of adults.

Sex, too, is not without influence. We expect to find the female, from her greater nervous impressibility, more prone to delirium. The hysterical form, which I think we might recognise almost as a distinct variety, occurs in women only.

Social condition, on the same ground, is alleged to act in a similar way. The higher classes are more liable to delirium than the lower. Their nervous system, being more highly developed and of more delicate organisation, has its equilibrium more easily disturbed.

Nervous tendency, too, may be enumerated, from whatever cause arising. Hence those unfortunates who have a neurotic taint hereditarily, whose ancestors were insane, epileptic, hysteric, neuralgic, &c., as well as those whose nervous systems have been damaged by cerebral injury, if they drink what to others would be a moderate draught become delirious madmen. So also pneumonia or other disease in a man whose nervous system has been undermined by alcoholic excess, is generally attended by violent delirium.

Diurnal influence.—Who has not noticed how a patient comparatively, if not completely, quiet all the day, grows restless towards evening, and all night long is incessantly delirious, yet falls into a quiet sleep as the morning dawns again? What is the cause of this? Is it connected with the removal of the curbing influence of the sights and sounds of day? Is it the nightly rise of temperature found in health and exaggerated in disease? What is the mysterious cause?

The *exciting* causes may be grouped under five heads.

1. *Anæmia.*—Thus in all the chronic wasting diseases, such as cancer of the stomach or elsewhere, we find that towards the end, as the patient's strength gradually diminishes, so he becomes subject to delirium. In those cases where the anæmia comes on very gradually, and the weakness of body proceeds *pari passu*, we usually find that the affection assumes the languid, low, muttering prostrate form.

In albuminuria, again, delirium is by no means uncommon; and when we remember the excessive pallor of the patient, and the great drain of albumen from his system, we cannot but attribute the mental derangement in great part to the anæmia. In this disease it may appear in various forms; it may gradually develop, as dimness of vision comes on, as a muttering wandering, or signs just like those of delirium tremens from alcoholism may arise; or the patient may have a series of uræmic fits; be comatose for hours, to awake a restless, speechless madman, to recover within a few days all his powers, but with the memory of those days completely blotted out.

After many acute diseases, such as pneumonia, a patient who has done well, and is seemingly out of danger, may suddenly become delirious. This is the 'delirium of collapse,' apparently due to cerebral anæmia, from palsy of the heart, and is very fatal in hemorrhages, profuse losses of blood from the lungs, or in fact from any other part. These are the best of all instances of delirium from anæmia, because no other causes co-exist. Thus I have known a man quietly asleep burst a bloodvessel in his lungs, and within five minutes be a raving satyr, obliged to be held down by two or three attendants, and, strangely enough, within half an hour he was as sensible and conscious as ever, doubtless from restoration of his cerebral circulation.

2. A second cause is *hyperæmia.* We have a pure, uncomplicated instance of this, at least we are told so, in the delirium of the Bacchanalian dancers, where the cerebral circulation is excited by excessive muscular exertion. But it can scarcely be doubted that in these instances it was exercise mingled with wine.

Still we see the effect of hyperæmia in the delirium of cerebral congestion, from whatever cause arising, most markedly in meningitis, encephalitis, and any other intra-cranial inflammations. The delirium which is so common when there is embarrassed flow out of and consequently into the right heart, leading to passive congestion of the brain, ought rather to be attributed to cerebral anæmia, inasmuch as the aerated blood enters the brain in much diminished amount, and so disturbs the function of the brain.

3. A third cause is *toxæmia*, the circulation of poisonous materials through the brain. This is doubtless in part also the explanation of its occurrence in albuminuria, when there is a collection of effete matters in the blood in the onset of the acute specific infectious fevers, in poisoning by many drugs, as belladonna, &c., in acute alcoholism, and delirium tremens.

4. A fourth cause is what might be called *pyræmia,* commonly known as hyperpyrexia, the circulation of high-temperature blood. This, however, is almost always connected with a rapid action of the heart, and hence with cerebral hyperæmia, so that few or no cases of pure pyræmia can be quoted.

5. A last cause may be given as *nervous shock.* This is an alleged cause. But though a very wide term, the only case I have seen which could bear this explanation was that of a woman, otherwise healthy, but extremely nervous or hysterical, who, on being refused permission to see her daughter, who was ill, became after a manner delirious, and was evidently quite irresponsible for her words and deeds, wrote a petition to the Home Secretary, &c. Doubtless this is the cause of many cases of insane delirium.

Varieties.—As one might expect in an affection of the mental processes, there are several varieties of delirium. It is very questionable, however, whether some of the names applied mark out distinct kinds, and not merely degrees.

1. There is the *low muttering delirium,* which describes itself, and which, occuring in fever, has had conferred on it the name of febris nervosa stupida.

It would seem generally to be found where there is great weakness and prostration, as in advanced typhoid, &c., or where there is only a feeble excitement, or disturbance of the equilibrium of the nerve elements of the brain.

2. There is *delirium ferox*, where the patient is raving, noisy, and violent, requiring restraint. It would seem to arise in consequence of considerable nervous disturbance in a vigorous subject; but it is found even in the weak, when the disturbance is very great. When it is chiefly expressed in words, we have the *febris nervosa versatilis*, but to show how closely connected is this variety with the last, we have only to state that the muttering delirium may occur in the day, and the noisy garrulous form in the night, in the same patient.

3. There is *delirium tremens*, where the mental derangement is accompanied by trembling of the limbs. It is almost always the result of hard drinking. The delirium is generally suspicious, quiet, busy, and attended with horrible hallucinations. It must be remembered, however, that in alcoholic delirium there may be no trembling whatever, and that a trembling delirium not to be distinguished from the alcoholic may occur in other diseases. It is said to have been observed in typhus; and I have witnessed the same occurring in chronic albuminuria; the patient having been in Hospital some months, so that it could not be attributed to alcoholic excess.

4. There is *traumatic delirium*, coming on after the receipt of an injury, and manifesting itself under several forms. As usually interpreted, it seems to be nothing else than delirium occurring in and due to the surgical fever set up by the wound.

5. Then there is *delirium exaggerans*. This is a well-recognised form. In which a person has the highest notions with the smallest capabilities. He imagines himself the begetter of myriads while as impotent as a eunuch, fancies himself a very Hercules though he cannot rise from his bed, and bestows worlds upon his friends when he has not a penny to bless himself with. This curious variety is said to be found in general paralysis, in disseminated sclerosis of the brain and cord, and to be a frequent sign of commencing insanity.

Pathology.—If you ask me for a definition of delirium, I cannot give one, at least one that would include everything that is and exclude everything that is not delirium. The etymology of the word could be furnished; but that falls far short of the meaning of the thing. And if a definition is so difficult; how much more so a description of its pathology. Still we can inquire somewhat into its relations and physical concomitants.

In delirium we find several factors, each of which helps to make up the whole, but each of which alone might not by some be considered entitled to the full name 'delirium.'

First, We may observe that there is faulty perception. Thus a patient may tell you that the tinware of the ward seems to him like a shoal of fish, or he may mistake one of his nurses for his own wife, or fancy that the blood gushing from his own nostrils is pouring from the wounds of his next bedfellow. Here there is an impression on his organ of sense, but his perceptive centre is at fault. This is an *illusion.*

Again he may be in total darkness, unable to see any adjacent object, and yet from his words one learns that he sees himself surrounded by numerous persons and things, and sees all with the greatest vividness. Yet are they all unwelcome creatures of his imagination. Here there is no irritation of his perceptive centre through an organ of sense, but something is irritating his perceptive centre and producing in it the same condition that would have resulted from a sensory impression on it. There is perception without any external object to cause it, an *hallucination.*

Thirdly, You will find a patient who sees the tinware as though it were fish; he has an illusion, but yet knows that it is tinware, and can correct the erroneous perception by the other senses—by memory, or by reason. This patient has no *delusion.* If he believed firmly that he saw fish, and could not correct his illusion, we should say he had *delusion* as well.

Again, we find patients who have illusions which operate upon their minds, but we know nothing about them unless we institute special inquiries with the patient. Then we learn that there is a sort of dreamy disturbance of the thoughts only. This is the first stage of delirium, that which often occurs in commencing cerebral congestion from heart disease, in the fever of common colds, &c.; hence we inquire of the patient whether he is much troubled by dreams.

In the next stage we find the patient growing talkative, and the garrulity may vary from an occasional whisper during sleep up to uninterrupted and noisy utterances. Here a very much more profound effect is produced. And, lastly, we find the locomotory apparatus involved; from a little jactitation and restlessness, where the patient rolls in his bed, up to the condition in which he leaps out like a madman, and flies through the ward as for his life. In delirium tremens especially we find this very common. The poor wretch cannot be kept in bed. No sooner is the back of the attendant turned, not that he even waits for that, than he is up pacing his room, pulling about his bed-linen, building his bed in every corner, only to pull it down and pile it up elsewhere. I have seen it just the same after albuminuric fits. Here too we ought to place the picking of the bed-clothes, so commonly seen, and dignified with the double name of carphology and floccitatio.

There would seem, in fact, to be a sort of delirium agens; not one that must think or that must talk, but must *do*. Thus you will find two persons, of about equal strength, one of whom gabbles incessantly, while the other cannot be restrained from being up and about, but says not one word, even though you seize him and force him down on his bed. It seems almost like a distinct variety. It may be due simply to a peculiarity in the disposition of the patient, but it does seem to exist.

Here let me suggest that dreaming is a mild form of delirium, from which it cannot otherwise be distinguished than by its mildness. Natural sleep in a perfectly healthy body is sleep undisturbed by dreams. Were our systems just as they should be, we should not dream. You will notice that exactly the same circumstances that predispose to dreams predispose to delirium. They are more common in children, in the higher classes, in the nervous.

Moreover, we all know that before the advent of the easily recognised delirium come dreams, as in heart disease.

Yet, again, they are indistinguishable. Stand by the bedside of a child, hear it talking in the night; is it dreaming, or is it delirious? Both.

Dreams, too, are most vivid, most rapid, most persistent, when we are out of health or physically disturbed. The proverbial mince-pie for supper is a fruitful source through causing gastric disturbance. The headache from any cause arising, points to the truth that all dreams are due to physical derangement, and are but a milder type of delirium.

Lastly, see how alike are the manifestations. They are the same illusions.

It would seem now as if in delirium there were two derangements:—

1. A perversion of the perceptive faculty.
2. An excitement of the reasoning faculty.

Thus, in order that an impression from one object should cause the perception of another, as in illusion, or in order that, with no impression from an object at all, there should be the perception of it, there must be a perversion of the perceptive centre, and the second must be an aggravated form of the first. Now for the proper action of the perceptive centre we find a certain state of the centre essential; if that state is altered, its action will be deranged. This normal state depends upon its nutrition, and this, of course, almost solely upon the blood. A certain amount of blood, a certain quality of blood, a certain heat of blood.

Now it is to be noticed that this centre has a certain stability, consequently so long as the blood supply does not alter very greatly from the normal, the function of the centre is not deranged. If, however, there is a sudden variation to any great degree, then there is perversion. Thus I have already referred o the case in which a man sleeping quietly burst a blood vessel, and almost immediately began to rave in delirium; there was a udden upset in the cerebral circulation, which the centre could not withstand. When, however, the blood current was again qualised, and this took place in about half an hour, then the tability of the centre was such, that the normal powers of pereption completely returned, though the circulation still must have been somewhat deranged. This stability seems to increase with advancing years; hence we find that a very slight variation n the blood current of children is sufficient to produce derangement of their mental faculties.

It would seem, too, that these centres have a very great power f accommodating themselves to alterations in the condition of the blood, provided that this alteration comes on slowly, and so llows time for the accommodation to take place. Thus I have een patients far more anæmic than the one above quoted withut any delirium at all. It was the sudden disturbance in the utritive supply which caused so rapid and sudden an effect. But here is a limit to this accommodation of the centre to changes in its blood supply; hence when these changes become very profound, however slowly brought about, the power of accommoation can no longer keep pace with the change, and the patient rows delirious, as in wasting diseases like cancer, &c. This perversion, we have seen, can be brought about by alteration ither in the quantity of the blood (anæmia or hyperæmia), or n the quality of the blood (toxæmia), in the condition of the blood (pyræmia), and lastly by direct irritation of the centre itself, as in nervous shock.

But this perversion is not all. A man may fancy he sees one hing when he sees another, and yet not be accounted delirious. There is a second derangement, an excitement of the reasoning, thinking faculty.

Hence we find that when the patient is asleep, and when herefore all his mental faculties ought to be slumbering, he is mentally awake; he is thinking, he is living an imaginary life, nd often at such a rate as would be actually an impossibility. His emotions are so strong that they burst forth in laughter or in tears, or in excited gestures. All this shows an intense irritation of his thinking centres, and as a matter of fact are accompanied by an abundant excretion of the products of their disintegration.

These two may be combined together in any proportions, though as a rule they vary equally the one with the other. Where there is much perversion of perception there is generally much excitement, though this is not always the case.

Now as to the cause of the difference between the low muttering delirium and the fierce boisterous kind. The former variety seems to be due either (*a*) to great prostration of the patient's strength, or (*b*) to but slight irritation of the centres; the excited form (*a*) to moderate irritation in a vigorous subject, or (*b*) to intense irritation of the centres. That it is rather, however, dependent upon the intensity of the irritation than upon the patient's strength, is shown by the fact that a low muttering delirium in the day will become a noisy boisterous delirium at night, whilst the patient's strength cannot have proportionately increased in the meantime.

Before concluding the pathology I would make one suggestion. A patient came in with hæmoptysis, and while he was bringing up blood in large amount, he had an epileptiform fit, and was well again in a few minutes. The next day he brought up a second large quantity, had a second fit, and recovered from it in a few minutes. He had no delirium at the time, and very little afterwards. He never had had a fit before. Might we not suppose that this fit was the equivalent of the other man's delirium; that in the one case the man's psychical centres were thrown out of their stable condition, and in the other the man's motorial centres? The case of an albuminuriac may be put by the side of this. A man had uræmic fits for twelve hours, then coma for thirty-six, then delirium, in which he did not speak a word, but was ever out of bed. If the fits were due to œdema of the motorial centres, might not the delirium subsequent to it have been due to an œdema of the psychical centres, and of that part nearest to his motorial, and hence his peripatetic proclivities, and hence might not the delirium be the neurotic equivalent of the fits?

If so, is insanity the analogue of total chorea, and monomania of hemichorea, or of chorea localised in one set of muscles.

Treatment.—In the treatment of delirium the best results will follow prescriptions according to causal indications.

Thus, if it be due to anæmia, lowering measures are inadmissible. On the contrary, one gives nutritious nitrogenous diet in the wasting diseases, either by the mouth if it can be aken, or by the rectum if it cannot. Often, too, as in the wanderng albuminuriac, a good dose of brandy, one or two ounces, iven in the evening, will quiet the nervous system, and proure a night's sleep. So in the delirium of collapse, one adninisters carbonate of ammonia in five-grain doses, and tincture f opium in m. v. doses every four hours, the laudanum in these mall quantities acting rather as a stimulant than as a sedative.

If it be hyperæmia, then the treatment must be the very pposite, with a view to diminish the amount of blood in the rain. Here one shaves the head, if the disease be inflammatory, nd applies to the scalp evaporating lotions or the ice-bag. A ood stiff purge, too, by causing derivative action to the intesines, and drawing off a quantity of fluid from the blood through he bowels, considerably lessens the intra-cranial pressure. This ill not infrequently relieve in the same way the delirium due o embarrassed right heart, by diminishing the amount of blood o be passed round the system.

When it is toxæmic the treatment is not so satisfactory. The ndication is to remove the poisonous material from the system; ut this is generally almost if not quite impossible. For in hronic disease such as nephritis, or jaundice, &c., the poison has een increasing in spite of all our long-continued efforts to liminate it. When, therefore, it has become so great in amount s to upset the mind, it is not to be supposed that by any easures, however heroic, we shall be able to get rid of it, irectly the delirium points strongly to that course. We may se diuretics, diaphoretics, and purgatives, but they will be of ut little avail, and are but a forlorn hope.

When, however, they are in excess in the blood because they ave been taken as poisons through the stomach, or have acumulated rather from excessive formation in acute diseases, as yphus or typhoid, than from deficient excretion, then we may et the different emunctories to work with some advantage and ome hope of success. To enumerate the different drugs would e tedious.

If the cause be pyræmia, we have a fairly efficient remedy in e cold bath or in cold packing. Perhaps it would be no easy atter to bathe delirious patients, nor have I had any experience bathing them. But those who have used this remedy for high emperature simply cannot but have noticed how drowsy the atient becomes after a bath, who before was wakeful and restss. Hence one would presume that its effect would be sedative pon a delirious patient and beneficial.

Next as to indications from the symptoms manifested.

Since there is evidently considerable cerebral excitement, rational treatment would consist in the exhibition of sedatives.

Thus full doses of opium or morphia may be given. This, however, is inadmissible in many cases, as in albuminuria, whether it exist as the primary disease, or only as a complication of the causative disease, be this typhoid, erysipelas, an injury, or aught else. So also in children, one would hesitate to give controlling doses lest the effect should be rather greater than was intended. A far safer remedy is the hydrate of chloral, which can be given in twenty, or even forty grains, and repeated if required. This would be preferable in those cases where there is cerebral hyperæmia, as it is supposed to act by producing anæmia of the brain; but it will act even in anæmic delirium. Bromide of potassium is also recommended, but I have no experience of its use here. Maybe it would be efficient in the milder cases and in children. Chloroform by inhalation I have never seen administered for delirium; sometimes, it is said, the patient is worse after he recovers from its effect than he was before, and in severe disease it would be rather a dangerous remedy.

When the delirium is exceedingly violent, it is advised to give with the nervous sedative a cardiac depressant as well, such as antimony or digitalis. Moreover, the antimony is said to be preferable when there is structural disease of the kidney, as it acts rather upon the skin, and digitalis when there is no kidney mischief, as it is a powerful diuretic. And here one might mention that digitalis alone is used by some practitioners in the treatment of delirium tremens, not in the usual doses of m. xv. or m. xx., but in single exhibitions of half an ounce of the tincture, a second dose to be taken in four hours' time of half an ounce. But I have no experience at all of antimony or digitalis in delirium ferox, nor of digitalis thus boldly given.

By one or other of these remedies we may generally succeed in quieting the most boisterous patient. All that we require to know is, that with them we can quiet *any* patient if we like to push them far enough; and, finally, that it is not by any means necessary to *try* and quiet every patient's delirium.

February 1.

Mr. Darbishire showed a working model of a form of anterior leg-splint.

Dr. Hart showed two specimens; the first, a liver ruptured through external violence; the second, an aneurysm of the aorta, a which the wall of the sac was composed largely of connective issue, and greatly compressed the lung.

Mr. Weiss then showed a patient convalescing from an attack f traumatic tetanus.

A series of cases of tetanus occurring in the wards of the Hosital was then read by Mr. Weiss and Mr. Pye, and the latter iowed some microscopic sections of spinal cord and sciatic nerve om a case of traumatic tetanus.[1]

On the motion of Dr. Wharry, the discussion was adjourned till ie following meeting.

February 8.

Dr. Maberly showed a fœtus at full term, delivered after craniotomy had been performed, the mother suffering from cancer of he uterus. Turning was effected before delivery.

The adjourned discussion on tetanus was concluded.

February 18.

Mr. Pye showed a woman suffering from lupus exedens, in vhom a considerable portion of the face had been destroyed.

Mr. Walsham read a paper on 'Palpation by the Rectum.' He reated the subject under five headings—

1. The size of the hand that could be safely introduced.
2. Method of introduction.
3. The distance the hand could be passed.
4. The structures that could be recognised in the healthy state f the parts.
5. Diseases in which palpation was of service.
6. Conclusions.

After briefly discussing the first four points, for fuller details f which he referred to his paper in the reports of the preceding ear,[2] and to a short article which he had contributed to Mr. Iolden's 'Landmarks,' Mr. Walsham passed on to consider the fth heading, *i.e.*, diseases in which palpation by the rectum was f service. He stated that first and pre-eminently it was useful n the diagnosis of doubtful affections of the pelvic organs, of the terus, ovaries, bladder, and ovarian ligaments. He referred paricularly to its use in estimating the condition of the pedicle in varian tumours, and related a case in which, in the dead body, e distinctly determined the peritoneal connections of a small varian cyst.

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[1] The specimens were from a case of traumatic tetanus under the care of Mr. angton, and in which the sciatic nerve was stretched.

[2] *Vide* St. Bartholomew's Hospital Reports for 1876, vol. xii. p. 223.

It permitted the ready removal of foreign bodies from the rectum and the performance of operations on fistula high up; it was also useful in diagnosing strictures, especially those in the upper part of the rectum, and lower part of the sigmoid flexure.

It was of aid in the diagnosis of aneurysm of the abdominal and pelvic arteries, and in distinguishing between aneurysm of the pelvic arteries and cancer of the pelvic bones.

It was especially valuable in determining whether in gluteal aneurysm the sac encroaches upon the pelvis through the great sciatic foramen, so as to involve the pelvic portion of the vessel.

It was of great service in the diagnosis of obturator and ischiatic herniæ, as the obturator foramen and ischiatic notch could be thoroughly explored by the hand in the rectum. It was also of use in the diagnosis of abdominal tumours and stone in the kidney.

Mr. Walsham also suggested that benefits were likely to be derived from the adoption of this method of examination in obstetric practice, and finished his remarks by stating the conclusions he had drawn from his present experience.

March 1.

Mr. Macready showed a specimen of ruptured spleen in which considerable local repair had taken place,

Dr. Maberly read a paper on 'Placenta Prævia.'

He urged the importance of the proper understanding of placenta prævia and its treatment, since the disastrous consequences which frequently follow can be very considerably controlled by appropriate measures.

He contrasted the two methods of treatment now in practice, viz., that by turning and rapid emptying of the uterus, and that by separation of the placenta from the uterine wall, and dilatation of the os as recommended and practised by Dr. Barnes.

He cited two cases which had occurred recently in the outpatient practice of the Hospital in which each method had been used.

In the first case there had been considerable hemorrhage for at least six hours before his arrival, which was attributed to a fall some little time previously; but the patient was not in an exhausted condition.

The os would only admit one finger, and the placenta was felt just within and to the left side, with the head of the child beyond.

There had been no uterine contractions, and the patient was about a fortnight from her full time.

Under chloroform he separated the placenta as far as the finger would reach, performed bipolar version, and then ruptured the membranes.

The os uteri was very rigid, but by steady pressure of the fingers in the form of a cone, dilatation was effected, and delivery accomplished after some difficulty, the child being born dead.

The patient was in an alarming state of collapse, and was with great difficulty restored by stimulants and other means. She ultimately, however, made a good recovery, and was convalescent in a month.

The second case was one in which hemorrhage occurred two days after a fall, to the amount of about half a pint, in a healthy multiparous woman. He was sent for in consequence, and found hemorrhage going on, and without uterine contractions.

Os uteri was small and rigid, with the placenta attached to the left side and protruding through it; beyond was the head of the child.

He separated the placenta as far up as possible, ruptured the membranes, and gave f. ʒij. of extract of ergot, placing a binder tightly on the abdomen.

Uterine contractions were thus set up, and the os began to dilate. There was only slight hemorrhage after this, which ceased on again separating the placenta and stimulating the uterus to further contraction.

Labour went on steadily without further hemorrhage, but was retarded by the large size of the head. The child was still-born.

The placenta came away of its own accord, and the uterus contracted readily.

The author then endeavoured to show that the cessation of hemorrhage was due in all cases of placenta prævia to uterine contractions, which ought to be rapidly set up by artificial means.

This was to be done by endeavouring to dilate the os uteri, rupturing the membranes, and giving ergot.

The dilatation was accelerated by separating the placenta from the uterus with the finger, which thus accomplished in a moment what the unaided efforts of the uterus would take many hours to do. This separation must take place sufficiently far up to admit the presenting part, which, if it be the head, aids in arresting hemorrhage by acting as a firm plug through the medium of the placenta.

In contrasting the treatment and the results of these two cases the following rules were recommended, according to the kind of case with which one had to deal, and which he divided into two classes—

I. Those in which hemorrhage was not so alarming as to call for immediate delivery.

II. Those in which rapid delivery is necessary from the severity of the hemorrhage, and from the exhaustion occasioned by it.

In the first class, endeavour to bring about uterine contractions by—

1. Separating the placenta from the uterus, and enlarging the os with the finger.
2. Rupturing the membranes.
3. Giving ergot.
4. Effecting dilatation by the fingers, or by the use of dilating-bags if necessary.
5. Applying an abdominal bandage to aid in retaining the head of the child at the os uteri.

In the second class, version and rapid delivery.

There were, however, a small number of cases in which the os is so rigid as to defy any of these means of dilatation, and here, where the hemorrhage is excessive, you must plug the vagina tightly, and endeavour to support the patient's strength, leaving the labour to take its own course.

One of the great advantages of the first method is that chloroform is not necessary, but it must be given in nearly all cases of turning, and whilst delaying treatment during its administration, produces also great depression, and from the vomiting so frequently caused prevents restoratives being retained by the stomach in case of collapse.

March 8.

Mr. Clubbe and Dr. Verco were appointed to audit the accounts of the Society.

Dr. Champneys showed a female infant suffering from ectopia vesicæ, who presented several points of interest, namely, (1) its sex; (2) the imperfect condition of the vagina; (3) the probable bicorned condition of the uterus; (4) the absence of the symphysis pubis; (5) the apparent openings of the Fallopian tubes into the bladder.

Dr. Hall read a paper on neuralgia.

Dr. Anstie's definition of neuralgia was quoted. The ætiology of the disease was the first question discussed. Out of sixty-four cases, to which reference was made, fifty-six were women and only eight men.

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[1] *Vide* Article IX. p. 83 of present volume.

Prosopalgia was found to be more frequent in women and sciatica in men.

Hereditary predisposition was alluded to, and age was pointed out as being an important factor, children being remarkably free from it. It is very frequently met with at the adult period of life, especially among anæmic and chlorotic young women, but it is, as a rule, in the old or those prematurely old, that the intractable forms of neuralgia are met with. Worry and anxiety were stated to be the most marked of the predisposing causes. The necessity of paying attention to the direct exciting causes, such as caries of the teeth, &c., was insisted upon. The varieties of neuralgia may be classified according to their local distribution—

I. Superficial neuralgiæ.
II. Visceral neuralgiæ.

The superficial varieties may subdivided into—

(*a*) Neuralgia of the fifth nerve.
(*b*) Cervico-occipital neuralgia.
(*c*) Cervico-brachial neuralgia.
(*d*) Intercostal neuralgia.
(*e*) Lumbo-abdominal neuralgia
(*f*) Crural neuralgia.
(*g*) Sciatic neuralgia.

In the treatment of neuralgia the first thing to be done is to relieve the patient of his pain, be it only for a time, so as to afford an opportunity of treating the constitutional cause, if such there be, at the bottom of the disease.

He gave the particulars of a case, in which the presence of two minute portions of stumps had been overlooked, and the disease was not cured till these were removed; he deduced from this case the necessity for a most careful examination of the condition of the teeth in trifacial neuralgia.

Notes of three cases were read to prove what a speedy and potent remedy croton chloral in five-grain doses three times a day was. The tincture of gelseminum in twenty-minim doses had been found of use; but it was not so uniformly successful as the croton chloral. One of the most useful drugs to begin the treatment of a case of trifacial neuralgia is the chloride of ammonium in half-drachm doses, and it has the advantage that if six doses fail to give relief, it is useless to push the remedy further. Out of eighteen cases, ten were cured, one was unrelieved, and seven did not return a second time; and inasmuch as this remedy produces its effects very speedily, there is every probability that some of these also were cured.

Mention was made of the fact that chloride of ammonium with a little perchloride of iron formed the basis of a patent medicine for the cure of tic-doloureux.

Among the local applications, the mixture of equal parts of camphor and chloral hydrate gave relief within five minutes in two cases. The aconite liniment was mentioned as occasionally of use.

In the treatment of sciatica it was found advisable to begin with a brisk purge, as the pain is often kept up by a loaded state of the rectum, and then the Haustus quiniæ c̄. potassii iodido with the application of a blister eight inches long by two broad along the course of the nerve.

Quinine in full doses was recommended in supra-orbital and frontal neuralgia, and in neuralgia generally if dependent on malarious influences or occurring periodically. Arsenic was said to be useful in occipital neuralgia. Iron, besides its action on the blood, also seems to act as a direct nervine tonic, and it is of course largely used in cases of neuralgia occurring in anæmic and chlorotic subjects. The carbonate is a very favourite preparation for this purpose.

In severe and intractable cases of neuralgia the hypodermic use of morphia is unrivalled for procuring sleep and breaking the habit of the pain, so as to give time for other treatment; the addition of a minute quantity of atropia to the morphia, say the $\frac{1}{120}$ of a grain of atropia with the $\frac{1}{8}$ of a grain of the acetate of morphia, appears to prevent the morphia acting as a diaphoretic, and consequently increases its anodyne effect.

Remedies such as the continuous current, acupuncture, and other surgical procedures, were only alluded to casually.

As regards general treatment, the patient must be got into the best possible condition of health.

With regard to diet, the patient should be ordered the most digestible articles. Pastry, sweets, uncooked fruits, &c., are to be eschewed, whereas fatty articles, butter, milk, cream, oil, and especially cod-liver oil are to be highly recommended.

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IE ABERNETHIAN SOCIETY having determined in Special Meet-
hat it was advisable to publish a Report of its Proceedings,
inted a Committee to carry the project into effect. The Com-
ee therefore drew up the following Rules, which were accepted
he Society at the General Meeting:—

1. With the approval of the Editors (of the Hospital Reports), that the Proceedings of the Society should be published in the Hospital Reports as heretofore, but in more detailed form, and that afterwards reprints should be thrown off for distribution among its Members.

. That the papers for publication be selected by a Committee consisting of the two Presidents, two Vice-Presidents, two Hon. Secretaries, and the Hon. Treasurer.

. That the reprints shall be stitched in the form of a pamphlet, and shall contain a complete List of the Members of the Society for the last five years, and a Table of Contents shall also be provided, with a printed cover.

. That copies be distributed, free of charge, to Members who are not of more than five years' standing, and that those of more than five years' standing may obtain copies on payment of one shilling each.

. That these Rules be also printed in each copy of the Proceedings for the information of Members.

SESSION 1877-78.

OFFICERS.

Presidents—MR. MILLS AND DR. WHARRY.

Vice-Presidents—MR. PYE AND DR. DARBISHIRE.

rary Secretaries—MR. EVE AND MR. BRUCE-CLARKE.

GENTLEMEN WHO HAVE BECOME MEMBERS OF THE SOCIETY DURING THE PAST FIVE YEARS.

'3-74.

E.
A. E.
, D. W.
H.
L.
A.
R.
R.
G. F.
R. B.
S.
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Prosser, T. G.
Pye, W.
Ranking, G. S. A.
Robertson, F. F. A.
Schofield, R. H. A.
Shoolbred, W. A.
Smith, Gerald.
Spooner, F. H.
Thomas, J. R.
Watts, F.
Wharry, R.
Wilmot, J.

1874-75.

Abercrombie, J.
Adams, J.
Bamber, C. J.
Bateman, A. G.
Calcott, J. B.
Campbell, J. M.
Chapman, H. F.
Clarke, W. Bruce.
Collingridge, W.
Cripps, E. C.
Dennys, G. W. P.
Dingley, A.
Edmunds, R.
Edwards, F. S.
Eve, F. S.
Gabb, C. B.
Good, F. T.
Kidd, P.
Lyons, Isidor.
Paget, G. E.
Patterson, G. H.
Roughton, J. W.
Thurland, F. E.
Waylen, S. A.
Weiss, H. F.

1875-76.

Adams, A. P.
Anderson, A.
Ashton, C.
Baker, W. J.
Baker, W. T.
Blaikie, J.
Blakeney, H. F. B.
Bradford, A. S.
Bradshaw, J. D.
Bruce, R.
Burgess, W.
Burlton, A. H.
Colenso, R. J.
Craddock, F.
Craven, R.
Cumming, R. F.
Cuthbert, C.
Cuthbert, W.
Dingle, W. A.
Dixon, G.
Falkner, J.
Gayton, F. C.
Gaze.
Gill, R.
Gipps.
Hart, A. P.
Hasleden, R.
Hooker, C.
Johnson, G.
Kirsop, T.
Langdon, J. W.
Lewis, T. H.
Lillies, H.
Lockwood, C. B.
M'Kee, G.
Mackrell, A. S.
Morse, E.
Moullin, N. M.
Paulley, J.
Plumbe.
Prowse, A. S. W.
Redmayne, R.
Steele, H. F.
Sugden, D. A.
Tait, E. S.
Taylor, W. C. E.
Townshend, K.
Trevan.
Webb.
West, E. de L.
West, W. F.
Wharry, A. J.
Whitley, C.
Wickham, W.
Woodward, F.

1876-77.

Barratt.
Clark, A. N.
Clarke, C. D.
Coles.
Cooke.
Dismore.
Dumbleton.
Gabriel.
Griffiths.
Harbrook.
Hayward.
Hoeken.
Jackson.
Jolliffe.
Krouk.
Langton.
Liddell.
Maude.
Meade.
Meadon.
Morgan.
Nall.
Nicholson.
Nicoll.
Oakley, A.
Oakley, H.
Ogle.
Payne.
Pearless.
Prickett.
Pycock.
Richardson.
Rowsall.
Shears.
Shephard.
Smith.
Sylvester.
Waldo.
Walters.
Wells.

1877-78.

Armitage.
Bagshaw.
Boulby.
Brewith.
Buckle.
Burnes.
Chaffey.
Clapp.
Clarke, C. D., jun.
Crow.
Day, D.
Edwards.
Finch.
Franklin.
Gripper.
Haig.
Herringham.
Howard.
Laddell.
Mark.
Marshall.
Milner.
O'Neil.
Outhwaite.
Paget.
Payne.
Preston.
Raymond, J.
Raymond, L.
Reid.
Ross.
Royle.
Shaw.
Spry.
Stead.
Sykes.
Thomas.
Tooth.
Walker, C. R.
Walker, E.
Wheeler.

PROCEEDINGS

OF

THE ABERNETHIAN SOCIETY

FOR WINTER SESSION 1877–78.

October 11, 1877.

Mr. Langton delivered the introductory address.

October 18.

Mr. Butlin read a paper on 'How to Distinguish an Innocent
m a Malignant Tumour.'

(*Abstract of Paper.*)

Paper written partly to correct certain errors which exist
ongst students respecting malignant tumours, and to point
t the chief signs by which malignant tumours may be recog-
sed.

The errors are, a belief in the freedom of infancy and child-
od from malignant tumours; a strong belief in the early and
nstant occurrence of the cancerous cachexy, and an equally
ong belief that a malignant tumour can only be distinguished
the microscope. The truth respecting these three things is,
at children are very liable to malignant sarcomatous tumours;
at the cancerous cachexy is not common in external cancers,
d is exceedingly rare as an early effect of an external tumour;
d that in by far the greatest number of cases the general charac-
rs of a tumour determine its malignancy quite as certainly as
e microscopical characters.

The main features by which tumours are distinguished are—
their characters before removal; 2. their characters after
moval; 3. their microscopical characters.

1. *Before removal,* the age of the patient, the seat of the tumour, the rate at which it has grown, and the manner of its progress, are the points to be kept in mind. Taken apart, they are not of so much value, but combine them and they are most important. Thus, given a tumour of the breast, of six months' duration, in a woman of forty-five, the chances are it is malignant. Or a tumour of the eyeball in a child of a year old; or a quickly growing tumour connected with bone in a boy of ten; or an ulcerated tumour of the lower lip in a man of seventy; the probabilities are strongly in favour of malignancy in each of these cases.

Malignant tumours may occur at any age, but are more common after forty. They may grow from any part of the body, but the lower lip, penis, and testes in men, the breast, uterus, vulva, and ovaries in women, the tongue, arms, rectum, and bladder in both sexes, are seats of election. In young people it is more frequently such parts as the eye, the testis, and the bones that are the seats of malignant tumours. In considering the rate of growth, the growth of innocent tumours in similar structures must, as far as possible, be taken for comparison. The manner of progress of a malignant growth is most characteristic. It incorporates surrounding tissues in its growth ; it ulcerates by growing into and through the skin; it will grow from soft parts into bone or the reverse; it will sometimes affect the neighbouring glands, sometimes break out in many places successively or simultaneously, and sometimes affect internal organs.

2. *After removal,* the important points are the presence or absence of a capsule; the nature of the tumour on section; its relation to surrounding tissues; whether it be simple or mixed. Very few malignant tumours are encapsuled unless they are still enclosed in the capsule of the organ in which they originate. Some of the sarcomata have thin, easily-torn, incomplete capsules. The implication of muscle on one side, of skin on another, by a tumour growing in a gland; the affection of bone by a tumour commencing in the soft parts, or *vice versâ*, are strong presumptive evidence in favour of malignancy. The appearance on section taken alone is not so important, but taken with the other points becomes highly so. Mixed growths are not always malignant, but there are certain forms of mixed growth which are very commonly so. For instance, soft tumours of the testis containing cartilage; very large, irregular, ossifying or calcifying tumours of bone.

3. *The microscopical characters* by which malignant and innocent tumours are to be distinguished are by no means so easy to decipher as might be imagined. There are not any cells

which can be recognised apart as 'cancer-cells.' The examination of the fresh juice of a tumour is generally useless, often misleading. If you undertake the microscopical examination of a tumour, you must cut and examine sections properly prepared and mounted; and you cannot give any reliable opinion as to its nature until you have been made thoroughly acquainted with its history, its position, its characters before and after removal; and, speaking generally, it may be said that whether the structure be that of sarcoma or of carcinoma, the more rich in cells a tumour, and the less developed its structure, the more malignant it is. And again, large size of cells, irregularity of shape, inequality of size and number of nuclei, and presence of brood cells are all indications of malignancy.

October 25.

Dr. Harris showed a specimen of intra-pericardial aneurysm of the aorta.

Dr. Wharry read a paper on 'The Treatment of Bronchitis and Croup.'

November 1.

Mr. Darbishire read the notes of a case of pneumonia; the main points of interest in which were the long period of hyperæmia of the lung and high temperature, followed by sudden and quick defervescence.

Mr. Pye exhibited a specimen of enlarged prostate with a villous growth springing from the neck of the bladder.

Mr. Bruce-Clarke then read a paper on 'The Rationale of Bone-Setting.'

It is impossible to remain in ignorance of the fact that no inconsiderable number of surgical cases eventually find their way into the hands of the bone-setter.

Wearied out by numberless inconveniences, and perhaps in addition by no small share of pain, the patient is advised by some friend to consult a bone-setter. He is told he has a bone out; the bone is replaced with a crack, and the trouble perhaps of years is brought to a sudden termination. Such is no exaggerated picture, and one which not a few quondam sufferers will frequently depict.

More commonly a man falls down and sprains his ankle, possibly severely; he summons his medical attendant, and is subjected to some well-recognised form of treatment. All active pain ceases, and he fondly imagines he is well; he endeavours to walk, but pain precludes any such attempt being carried into execution. He again seeks the counsel of his medical adviser, who assures him, and with perfect justice, that no bone is out of place; he must give it time. But time goes on, and yet little if any improvement takes place; possibly in a month or two he consults a bone-setter, and walks out of the bone-setter's house perfectly cured.

If a minute examination be made in any such cases, whether it be a hip, an elbow, or any other joint that is affected, it is in the majority of cases usually the rule, that the part affected has undergone at some time or other a greater or less degree of inflammation.

There are ample opportunities, both in the surgery of this Hospital and elsewhere, for the study of such cases as these; and let me here say, that it is only to such cases as have come under my own individual notice, and usually under my own care, that I propose to refer to-night.

It is only by thoroughly grasping the pathology of these cases that it is possible to understand the treatment of the bone-setter and the benefits which it confers.

It is, as may easily be imagined, very rarely that opportunities are afforded for the dissection of these cases; for though inconvenient and painful, they are not dangerous to life.

Twice during the past year has it been my good fortune to secure such specimens for dissection, and I propose briefly to describe them.

The first was a finger.

A nurse in this Hospital poisoned her index finger, and it suppurated. When the finger again resumed its natural appearance, flexion was almost an impossibility, except with the greatest pain. Regularly every day for about three weeks I employed rapid and forcible flexion; several very audible cracks were heard at first, and the power of flexion slightly improved.

As, however, no further improvement took place, and she was anxious to part with her finger, which was very much in the way, the finger was shown to Mr. Langton, who approved of amputation.

Amputation was performed through the first phalanx by Mr. Weiss.

On examination, the joints were quite natural and healthy, but between the tendons and their sheaths were numerous bands of adhesions, so that their motion was exceedingly limited. I may here add, that before amputation was performed, the general impression was that the tendon had sloughed, and hence the inability to flex the finger.

The second case was that of a man who several years ago ll down a coal-pit; he bruised his arm severely, and had ver been able to use it. He came up from Wales, determined, nothing further could be done for him, to part with an arm ich was at once painful and cumbrous. After a consultation the subject, his arm was amputated at the junction of the wer and middle third.

Wishing to see what the condition of the joints and their rroundings would be, both after and before any movement d been employed, I determined to flex and extend some nts until they were free, and to leave others untouched.

Accordingly I proceeded to operate on the little and ring gers, with the result of producing in both cases a compound slocation backwards of the last phalanx.

To the significance of this fact I shall refer later on.

I then operated on the middle finger, only very gently; several cks took place, as in the previous cases, only without any h untoward dislocations.

When subsequently the limb was dissected, I failed to satisfy self that, in the case of the middle finger, which had been cessfully operated upon, any band-like adhesions could be n torn across.

But on dissecting out the other joints, I was quite satisfied at the obstacles to free movement were the connective tissue nd the joints, and to a less extent the skin itself. When the nnective tissue was freed here and there with the knife, the nt worked easily.

In all cases the joints were perfectly healthy; there were no nds of adhesion inside the joint.

In this case there was probably a lesion of the nerves in the illa, as the muscles did not react to electricity when the rves were stimulated—at least, such was the general opinion.

To put it briefly, then, it appears as though the obstacles to vement in such cases are bands of organised inflammatory usion, formed precisely in a similar way to those of the pleura ring an inflammatory attack. By the tension on the neighuring parts they give rise to pain, which their rupture relieves. is their rupture which gives rise to the cracking sound. I n only compare this noise either to the faint crack of a whip, to the sound of tearing which is produced by the butcher en he forcibly tears the skin off a sheep in place of dissectg it.

To effect this process of rupturing adhesions, the bone-setter nploys the distal extremity of the limb as a lever, and firmly asping the affected joint with the other hand, works the part rapidly and vigorously, each movement being executed in the direction which causes the greatest pain, as pain alone can afford us a means for distinguishing the position of the adhesions with which we have to deal. In many cases, one such operation is sufficient, but if not, after several days have elapsed, during which local tonics, such as salt and water, liniments, &c., are employed, the same operation is repeated, and so on until a complete cure is the result.

If the pain be very great, anæsthetics may be employed, which have the additional advantage of relaxing the muscles, and thus obviating no small difficulties for the operation.

For a fuller description of the *modus operandi* of the bone-setter, I must refer you to a little book called 'On Bone-Setting,' by Wharton P. Hood, to which I must express my deep indebtedness.

I will now pass on to consider the cases which I have actually treated by this method in the surgery of this Hospital. The first case was that of a woman, Sarah Cozens, who fell down and sustained a Colles fracture of the right radius. Her arm was put up with the usual side splints, and when I came on to dress, she was handed on to me as a legacy by my predecessor. The fracture united, but she was utterly unable to move her fingers and wrist, and her elbow and shoulder were slightly stiff. Possibly her troubles were due, partly at any rate, to my ignorance as a new dresser, so that the splints were not removed as soon as they should have been; but I have no note of the exact time they were kept on.

Rest and liniments appeared to yield no good result in this case, when the book on bone-setting fell into my hands, and I determined to give the system a trial. I commenced with the distal joint of the little finger, thinking that I could not do much harm to so small a joint, even if I did no good.

After firmly fixing the second phalanx of the little finger with the left hand, the right was employed in forcible and rapid flexion and extension. Considerable pain resulted from this operation, but the characteristic crack was audible. The remaining joints of the little finger were then operated upon in a similar fashion.

The following week no trace of inflammation was visible, and the movements of the finger were free. The patient was only too happy to submit the rest of her hand to a similar course of proceeding.

The rest of the fingers and the thumb were liberated, and in the ensuing week the wrist. A week later, the shoulder and elbow required a few movements only, and the patient was le to use her arm as perfectly as she had done before her cident.

Such a result was exceedingly encouraging, and I determined lose no time in seeking for fresh cases. I had not long to wait. would, however, be useless to give the details seriatim of a ge number of cases. A few more will suffice to illustrate the ne-setter's treatment.

A woman presented herself from Hertford, who had fallen wn and had injured her right shoulder. She was told at the ne by a doctor who attended her that no bone was broken or located. She had recovered the complete use of her arm, cept that she could not put it behind her to lace her stays. On making an examination of the shoulder, nothing abnormal esented itself. But considerable pain was felt in the anterior rt of the joint when she attempted to place her arm well hind her back.

It is worth while to remember this symptom of pain, as it is very constant one, and often affords the only clue to the ture of the case. It is very often on the inner side of the nt, and is, so far as I know, invariably situated on that side of e joint, which is opposite to the direction in which motion is nited. That is to say, if there is limitation of motion posterrly, the painful spot will be anterior, and so on.

But to resume this case. I informed the patient I could set r right by a momentary though painful operation, to which e consented. Seizing the shoulder with one hand, the arm nployed as a lever was rapidly moved behind the back, almost fore she expected it, and thus muscular contraction was voided.

The joint gave a crack, and the patient a scream, but a perct cure was the result; and she immediately placed her hand hind her as well as ever she could. If she had any farther ouble with the arm she was to return again. From that day this she has never returned, so that we may consider her case cured then and there.

The above case is typical of a great many which may be set ght at once. But it is not so with all; they need breaking wn over and over again, though they eventually yield to the erator's efforts.

This feature was well shown in two affections of the shoulder, ne consequent upon dislocation, the other following a severe uise.

A painter fell off a ladder, dislocated his shoulder, which was duced, and two months later I saw him. At that time there as little if any movement at the shoulder joint, though some mpensatory movement of the scapula had been set up.

It was immediately clear that without the use of anæsthetic, treatment would be by no means easy. After a preliminary bathing with salt and water, and the application of lin. saponis, he was placed under the influence of gas and of æther, and movement was commenced in all directions, which resulted in an audible tearing down presumably of adhesions. This treatment, along with the bathing, was continued for several weeks, the limb being extended, rotated, and flexed once a week. During the intervals he was ordered to use the arm as much as possible. At the end of a month movement was almost completely restored, and a month later he had full use of his arm. I ought to have stated that when he came to me first, he had partial paralysis of his extensor muscles in the affected arm. It seemed doubtful whether this should be ascribed to lead poisoning or to the local lesion. However, be that as it may, he recovered the use of his arm completely.

In shoulder cases it may be as well to remark, that there is considerable difficulty in fixing the scapula, and hence the adhesions cannot be dealt with as easily as those of the elbow, &c.

The other case in which stiffness of the shoulder followed bruising, I had the man under my care from the very first.

The first time I saw him the arm lay powerless by his side. He stated that whilst drunk on the previous night his companions had told him that he endeavoured to jump over a hedge, when he caught his foot and fell violently to the ground. He was picked up and taken home, and noticed the next morning that his shoulder was bruised, and his arm powerless.

As long as local tenderness on pressure existed, no active treatment was pursued. In about a week, without any treatment but lot. plumbi, he began to regain the use of his fingers, but after three weeks to a month had elapsed, and all tenderness had ceased, it appeared on careful examination that stiffness at the shoulder joint existed. He was treated like the last case by motion under anæsthetics.

He improved greatly under treatment, but was very careless in coming, and when he did come was often half-drunk, so that he was lost sight of before a complete cure was effected. I have no doubt, however, that further manipulation would have entirely restored the use of his arm.

These cases are fair representatives of a much larger number which I have had under my care, and in no single case has considerable improvement failed to take place; in most, perfect restoration of movement has ensued.

Such cases for the most part, if left to themselves, get well in e, if they are only slight, whilst the worst cases often go to ll the list of hysterical joints and obscure local paralyses.

ut it may be well to ask ourselves, If there is no danger in s moving about a joint, is it not liable to set up an attack ynovitis?

n answer to such a question I could only say that I have er met with a case in which such an untoward result has rred, or in which there has been any consequent local urbance.

his treatment would, however, be dangerous undoubtedly in inflamed joint, and, indeed, during the course of any acute ck; but when all the acuter stages have passed off, when the t is cool, and the synovial membrane not thickened, I see eason to apprehend any bad result.

seems, however, as though a limb which had long been disl became weaker and less able to bear violence. Not only adhesions formed, but the skin becomes contracted over the t, and is very easily torn. That such is the case the foling instances will well show.

t is related of Guérin, a French surgeon, that whilst envouring by means of pulleys to reduce an old dislocation of humerus, the forearm was torn off at the elbow. The *modus andi* alone can hardly account for the accident.

Vithin the last year, an old dislocation of the humerus was g reduced in the theatre of this hospital, when the axilla laid open by the pressure of the heel, and the axillary artery bare, but no more than ordinary violence was employed; ordinary dislocations are easily reduced without the slightest ble.

n the case of the arm which I referred to before, in which, r it had been amputated, I produced a compound dislocation wo fingers, without any unnatural violence, the solution of occurrence is to be sought in the condition of the skin.

ne more example will suffice. Whilst going round the lehem Hospital a few weeks ago, I saw a patient with his l tied up, and was informed that one of the attendants had n hold of his hand, which had been paralysed and conted for years. No roughness was used, but the skin all ss the flexor surfaces of his fingers had been split quite ss. In such cases it is needless to remark that no prudent eon would attempt to use any violent motion. Gentle ion, coupled with galvanism, local tonics, and other imvers of nutrition, are in such cases indicated. It would seem altogether improbable, that if the skin is so brittle the per tissues may be so as well, and hence less violence is required in the operation; but be that as it may, it is well to be on our guard in all cases of long-standing injury where tissue-change is likely to have taken place.

This short notice of bone-setting can hardly be concluded without allusion to cricks of the neck, and other imaginary and real diseases of the vertebral column, which come so often under the hands of the bone-setter.

If the injury be but slight, there is often more alarm on the part of the patient than real harm inflicted, and the effect of pain at the hands of the bone-setter is quite marvellous.

But if such injuries afford the bone-setter some of his most brilliant successes, they also include his most disastrous failures, ending not unfrequently in the death of the patient. Indeed, many of the more experienced are only too happy to leave alone any disease of the spine, well knowing how liable such cases are to end in death.

From this brief notice, it is, I hope, clear, that joints under certain conditions will bear rougher handling, and with advantage too, than they are usually subjected to; the main difficulty in this, as in all other modes of treatment, being to determine exactly when it may be employed with safety, and when it is altogether contra-indicated. It must be, however, obvious, that it is practical acquaintance, and it alone, which can supply the necessary diagnostic skill.

Mr. Marshall showed some embryological specimens, illustrating the development of the cranial nerves.

November 8.

Mr. Eve showed a specimen of abscess which occurred in an old hæmatocele, a few days before death, in a man who died of senile gangrene.

Mr. Lyons read a paper on 'The Treatment of Fractures of the Jaw.' *Vide* St. Bartholomew's Hospital Reports, vol. xiv. p. 105.

November 15.

Mr. Eve showed a patient who had recovered from a severe compound fracture of the leg with a useful limb. The skin was torn around the circumference of the limb except about one inch, and the muscles were much lacerated.

Dr. Abercrombie showed a specimen of ruptured aneurysm of the basilar artery.

Dr. Harris read a paper entitled 'The Ophthalmoscope in Medicine.'

Mr. Schofield read the notes of a case of hæmorrhage from e posterior palatine artery after staphyloraphy.

November 22.

Dr. West showed a specimen of abnormal circle of Willis; d the ovary of a child three weeks old, in which there were eral small cysts.

Dr. Champneys read a paper on 'Extroversion of the Bladder.' *de,* 'St. Bartholomew's Hospital Reports,' vol. xiii. p. 81.

Mr. Kidd showed some interesting microscopic specimens of in and kidney.

November 29.

Mr. Macready showed a specimen of necrosis of the tibia.

Mr. Röeckel read a paper on 'Bubo.'

(*Abstract of Paper.*)

The author began by stating that the question of inflamed guinal glands was a very simple one.

The commoner causes, such as the accumulation of smegma eputii, herpes of the glands, &c., were often overlooked. Other ses, especially in children, were prurigo, worms, or any affec- n about the anus. As a matter of fact, in simple gonorrhœa was extremely rare; when it did occur, it was often due to ft sores, which existed in addition to the gonorrhœa.

If a soft sore existed, a bubo was inevitable; we might reduce violence, but could not arrest its progress. When the bubo rst, it became for all practical purposes a soft sore. Its cha- cters were so well marked, that it was quite pathognomonic soft sores, and it sometimes came on when all trace of the imary lesion had vanished. The only way to account for e connection between chancre and bubo was to regard the bo as the means of getting rid of the chancre-poison from the od.

The glands of true syphilis as a rule never suppurated, and sides, the glands in other parts of the body as well as the oin were affected simultaneously. They were not usually und, because not usually looked for. When the inguinal glands ppurated in syphilis, it was not due to the syphilis, but to me local or personal peculiarity superadded to the syphilis.

As to the treatment of buboes, that of Furneaux Jordan's was e best, viz., painting round the affected gland with a strong lution of nitrate of silver. When the buboes opened, they should be treated like soft sores with iodoform. The plan also of Auspitz of Vienna might be tried, viz., making an incision early into the centre of the gland, and letting out what he calls the virulent pus, the essence of the poison. If this is done, it is said the affection does not go further.

December 6.

Mr. Pye showed a patient in which the functions of the median nerve were restored after complete division. The ends of the nerve were stitched together.

Mr. Eve showed his modification of the ordinary 'back splint:' it consisted in an interruption in the middle of the splint, with the two surfaces adapted so as to slide the one over the other. The modification was designed to apply direct extension to the foot in cases of oblique fractures of the tibia and Pott's fracture.

Dr. Brunton read a paper on 'Reflex Action as a Cause of Disease, and Method of Cure.'

December 13.

The Secretary read notes and showed photographs of cases of elephantiasis sent by Mr. A. J. Corrie.

Dr. Stowers read a paper entitled, 'Observations on the Study of Skin Diseases,' and commenced by giving a brief sketch of the anatomical structure and physiology of the skin, the various functions it performs, and the relationship it bears to some of the other organs of the body, especially pointing out the vast influence exercised upon the skin by the system generally, as as well as the powerful reaction produced upon the body by the skin whether healthy or diseased.

After enumerating the three special uses of the skin in the animal economy, the author described some of the early evidences that exist of the special recognition of skin diseases by the Jewish, Egyptian, Arabian, Greek, and Roman legislators, and physicians from the remotest antiquity.

Contrasting the present means of investigating disease with those of past ages.

For two reasons, dermatology should be especially interesting to the practitioner and student—1*st,* Because of the difficulties which attend their diagnosis. 2*d*, The obstinacy with which many of them resist the action of remedies, the coexistence of two or more forms of skin affections being one chief cause of the former.

Concerning classification, the writer enumerated the three
oups, viz., 1. Artificial; 2. Natural; 3. Regional, or local;
d advocated the use of those founded upon the original noso-
gical tables of Willan and Bateman.

Accepting the view that many skin lesions are due to malnu-
ition alone, the writer pointed out how improper diet, if long
ntinued, would, especially in young children, lead to the de-
lopment of cutaneous disease alone, or associated with certain
atheses, the strumous being the most common; and recom-
ended the adoption of a diet-scale such as is used at the special
in hospitals.

Concerning syphilitic skin affections, Dr. Stowers enumerated
e relative periods at which they appear after inoculation, and
eir favourite sites as pointed out by Devergie, and urged atten-
n to the following points in their diagnosis as contrasted with
nple non-syphilitic eruptions.

The diagnosis of syphilitic affections may be generally ar-
red at—

1. From the history of the case. A chancre followed by in-
ration of lymphatic glands, &c.

2. From the symptoms accompanying the eruption,—tint of
in, pain in head and joints, alopecia, ulceration of throat,
tis, nodes, gummata, &c.

3. From the several forms the eruption takes at one time on
e body, *e.g.*, condylomatous, roseolous, lichenous.

4. From the general coppery tint of the eruption and inter-
ning skin.

5. As a rule, there is absence of itching in syphilitic eruptions.

6. Syphilitic eruptions tend to assume a more or less
cular form.

7. When the eruptions of syphilis ulcerate, the ulcers are
nerally round, with perpendicular edges and unhealthy bases.

Characters such as these, however, must be taken together, as
e alone is insufficient to establish a correct diagnosis.

Too much importance in a diagnostic point of view must not
placed upon the improvement often coincident with the exhi-
tion of anti-syphilitic remedies, as the benefit in simple affec-
ns resulting from the alterative effect of mercurials is often
ry marked.

In the treatment of skin affections, temperament, and consti-
tional conditions, age, sex, and even occupation, must be
nsidered.

The author laid much stress upon rest as a remedial agent,
d recommended the use of splints to ensure it in such cases as
ute general eczema of the extremities. The application of an

elastic bandage in some forms of eczema with œdema is frequently very useful.

Dr. Stowers, after enumerating general indications for simple, medicated, and vapour baths, urged that too much care could not be bestowed upon the careful preparation of local remedies, especially ungents, and the thoroughness of their application, and concluded with the advice originally given by Dr. Latham, 'That the treatment of disease is, in fact, part of their pathology. What they need, and what they can bear, the kind and strength of the remedy, and the changes which follow its application, are among the surest tests of their nature.'

January 10.

Mr. Pye showed a kidney in an advanced condition of hydronephrosis, and which also showed the cicatrix of a rupture; for this injury the patient had been treated in the Hospital some months previously.

Mr. Eve read the notes of two cases of bruised kidney.

Mr. Eve read 'Cases, with Remarks, illustrating the Various Forms of Fracture of the Skull.'

He observed that it had been suggested that certain evenings should have a distinctly clinical character; with that object he had prepared the following cases, which had fallen under his own observation while house surgeon.

He illustrated the necessity of examining the bone with a probe, by referring to a case in which a compound linear fracture was thus unexpectedly discovered. This patient, who had rather severe concussion, did not pass any urine until thirty hours after the accident, then only 2 oz.; he had noticed this in other cases of concussion. This diminished activity of function was, he thought, an indication of the actual injury done to the cerebro-spinal nerve centres in concussion, and required time for its repair.

The mode of origin of fractures of the base of the skull, from falls on the vertex, was illustrated by a case in which distinct fractures were found at the vertex and base; the latter, which extended from either side of the foramen magnum, being due to the sudden transmission of the weight of the body to the occipital condyles, and not as was formerly supposed to *contre-coup*.

A case of compound fracture of the right parietal bone with depression was related. A considerable amount of bone was removed, and the brain was found to be deeply lacerated. This patient had complete motor paralysis of the left arm, and almost omplete paralysis of the left leg. He quickly regained power the leg, but the arm remained much longer paralysed, and never entirely regained the former strength of his hand and rist.

It was pointed out that the portion of the surface of the brain jured, viz., the superior or postero-parietal lobule, and the oper ends of the ascending parietal and ascending frontal onvolutions, as far as could be judged, and the extent of e paralysis, corresponded strikingly with Dr. Ferrier's experients.

This patient, some time after his recovery, one evening sudenly fell down in a fit; on his return to consciousness, in about half to three-quarters of an hour, he could not move his left m or leg. Next morning, however, he was perfectly recovered, d insisted on getting up and going out of the hospital. There as no evidence to show that the fit was epileptiform: the mperature was 101°.

A case presenting all the symptoms of fracture of the anterior d middle fossæ of the base of the skull was narrated.

It was interesting, from the fact that both optic nerves were volved in the injury, and the lesion in each case could be iagnosed with some probability from the ophthalmoscopic apearances.

A week after the injury he could count fingers held up before e right eye, but had only a perception of light with the left.

Ophthalmoscopic appearances:—

Right eye—choked disc, with numerous retinal hæmorrhages.

Left eye—slight fulness of the veins.

A month later the left eye presented all the appearances of hite atrophy, and was quite blind. The retina of the right ye became detached, apparently from hæmorrhage behind it; ision gradually diminished, and was at the end of three months nally lost.

The author thought that the left optic nerve was probably lmost destroyed by pressure, while the appearance in the right as probably due to venous obstruction.

In another case of fracture through the anterior fossa, the ision of the left eye was completely and at once destroyed. o change could, however, be detected in the disc until three eeks after the accident, when it was observed to be paler than e other. It subsequently became white and atrophied.

Finally, two cases of severe blows on the occiput from falling ackwards were related. Both patients had hæmorrhage from ne ear, rather free at first, but ceasing in a few hours, and not ollowed by the discharge of watery fluid. The author suggested that the hæmorrhage might have been caused by a fracture passing through the mastoid cells and lacerating the membrana tympani, but not involving the labyrinth, cochlea, or meatus auditorius internus, thus accounting for the absence of watery discharge.

One patient had complete loss of memory, with only partial return. He was imbecile for a week, and extremely perverse.

The other had an attack of convulsions shortly after the accident; also long continued but partial loss of memory, and was at first extremely irritable and perverse, with mental confusion for a few days.

The mental symptoms, it was suggested, might have been produced by severe bruising, followed by inflammatory reaction, of the anterior portion of the frontal lobe. M. Gama[1] has shown that bruising of the brain occurs from *contre-coup*.

These patients, from their perverseness and the slight power of restraining any inclination which they showed, resembled the monkeys from which Dr. Ferrier removed the anterior portion of the frontal lobe, which then lost all inhibitory power over their inclinations, and the faculty of learning by experience, viz., memory.

January 17.

Mr. Lockwood showed a specimen of obliteration of the arch of the aorta at the level of the *ductus arteriosus*.

The specimen briefly described below was obtained from the body of John Loomey, æt. 20, who fell down dead in the street, and was brought to St. Bartholomew's Hospital. There was no previous history. A post-mortem examination was made twenty-six hours after death. When the chest was opened, the pericardium was found full of blood, which had entered by a rent in the outer coat of the ascending aorta, leading into a cavity forming part of a dissecting aneurysm of the ascending aorta, innominate, right subclavian and carotid arteries. It had been caused by the escape of blood through a small rent in the coat of the ascending aorta. The aorta was highly athromatous and dilated, it had only two semi-lunar valves and gave off four branches, the extra one being probably the left vertebral. At the situation of the occluded ductus arteriosus there was a complete obliteration, marked externally by a slight constriction. It was of normal size above and below, giving off dilated intercostal arteries. It is to be regretted that the collateral circulation could not be more carefully dissected, but it was observed that the internal mammaries and upper intercostals were greatly dilated. I am indebted to the kindness of Dr. Legg for the above particulars.

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[1] Holme's System, vol. ii. p. 304.

In the cases of this abnormality described, the greater number died from the rupture of dissecting aneurysms. The cause of the abnormality can probably be explained by supposing a continuation of that process of development by which the dorsal aorta is obliterated between the third and fourth arches; occurring here also between the fourth and fifth arches.

Dr. West read a paper on 'Rheumatic Fever and its Complications,' illustrated by cases. The discussion was adjourned till the next meeting.

Dr. Griffith showed some microscopic specimens of the suprarenal capsules, semi-lunar ganglia, and skin of a patient who had suffered with Addison's disease.

January 24.

Dr. West showed a specimen of aortic disease with valvular aneurysm and rupture of one cusp.

The discussion of Dr. West's paper was continued.

January 31.

Mr. Hames read a paper entitled 'Experiences of my First Twelve Months' Private Practice.'

February 6.

A special general meeting was held, at which Mr. Griffith was elected honorary secretary, vice Mr. Bruce-Clarke resigned.

February 7.

Dr. Benton showed a calculus from the gall bladder.

Mr. Eve showed a specimen of ulcer of the duodenum.

Mr. Darbishire read a paper on 'The Clinical Aspects of Albuminuria.'

Dr. West showed microscopic specimens of croupous pneumonia and emphysema.

February 14.

Mr. Cripps showed a finger which had been torn off, carrying with it the whole of the flexor tendon.

Mr. Edwards read a paper on 'Fistula in Ano.'

(Abstract of Paper.)

After alluding to the important place fistula takes amongst rectal diseases, and having enumerated its different forms, the author passed on to the ætiology of the disease, saying that:— Fistula may originate in one of two chief ways—

(*a.*) Either from abscess due to ulceration and perforation of the bowels; or,

(*b.*) From inflammatory suppuration of cellular tissue arisin independently of this.

Mr. Edwards then pointed out that an abscess may form i one of the four following situations:—

1. In the subcutaneous tissue outside the anus, this bein the most frequent site of such a swelling.
2. In the submucous tissue.
3. Between the bowel and levator ani muscle.
4. In the ischio rectal fossa.

Amongst other causes giving rise to the disease were mentioned ascarides in children, inflamed hæmorrhoids and fissures for the confirmation of which cases were cited. Carious bon in the neighbourhood was pointed out as giving rise to a sinu which simulated fistula.

The treatment of abscess was then touched upon, the auth insisting on the freely laying open of the abscess as soon a detected.

A convenient way of opening these abscesses is as follows:— The finger of the left hand being well greased is inserted into the bowel and pressure made outwards in the direction of the abscess, at the same time that the thumb of the same hand is applied to the skin below the abscess outside. The swelling is now well grasped between the finger and thumb, and the rectum being guarded by the finger in it, a knife can be passed into the abscess without any fear of missing it or of injuring the gut.

The question of operating in phthisical subjects was then discussed. It was here observed, That if on examination of the part one finds a slightly raised orifice with sprouting granulations, and leading from this to the bowel a hard track, one may be pretty sure that the case will do well after operation. If, on the other hand, one finds a gaping and undermined opening, with the tissues around soft, flabby, and congested, one may almost confidently expect to find the patient phthisical.

With regard to the propriety of operating in phthisical subjects, author said, that unless the disease of the lungs is far anced, the operation in some cases seems to do good, and by removing a constant drain or source of irritation.

he paper then passed on to treatment of Fistula, which sists in laying open all diseases, either by the knife, elastic ture, or ligature and tourniquet, or by the first combined either of the other two.

few of the more important points alluded to were these:—

he advisability of keeping the bowels open for two or three s, previously to the operation.

he use of a steel director instead of an ordinary silver one, in some cases, to facilitate the manœuvres of the operator, forceable dilatation of the anus. What is termed the back- is no longer practised at St. Mark's Hospital, except quite he external orifice; this, together with the removal of over-ging edges of skin, was recommended. The necessity of ng open the sinus, which is often found running up in the mucous tissue above the internal opening, was strongly urged, ugh the author pointed out that this was contrary to the hing of Syme and Brodie. The different methods, as em-red by Messrs. Gowlland and Allingham, for dividing fistulæ up the bowel, or where there is a fear of hæmorrhage, e then described.

he healing of fistulæ spontaneously, and the combination of ula with stricture, were points which were shortly touched n.

s far as the *after treatment* was concerned, Mr. Edwards nted out the harm often arising from an over-dressing of the und. He recommended dry cotton wool as a dressing, laid all ng the wound or wounds, in preference to lint, as being warm, ht, and porous, and not so hard or irritating a substance as t. The means of arresting after-hæmorrhage into the bowel s then discussed, and amongst other after-complications men-ned was incontinence of flatus and of motion. This, the hor said, happens temporarily after operations in which the incter has been divided, lasting, perhaps, until the wound is led. Permanent incontinence may follow the division of h sphincters, especially in weak and debilitated people. o one is apt to get it following the division of a fistula where external orifice is situated far forwards in the perineum, ecially in women, being due in them (it is said) to division oth sphincter ani and vaginæ muscles.

ne would always be on the *qui vive* for this when operat- on a patient who had previously undergone division of the incter; in fact, in such cases it would be as well to acquaint the patient previous to the operation with the possible and untoward event which might ensue.

Mr. Griffith showed some microscopic specimens of cirrhosis of the liver and heart, and stated that the heart and liver which he showed were both from the same patient. The heart had undoubtedly undergone some fibroid change, hence it was spoken of as cirrhosis.

February 21.

Mr. Schofield showed a man suffering from iodide of potassium rash.

Mr. Doran read a paper on 'The Successive Stages of the Operation of Ovariotomy.'

(*Abstract of Paper.*)

The object of this contribution was to explain the importance of the numerous little precautions which the accumulated experience of half a century has shown to be necessary to insure success in ovariotomy, as far as it lies within the power of the operator and his assistants. An ordinary operation of this kind was described, and each step was dwelt upon briefly or at length according as its necessity was well known, or, on the other hand, obscure at first sight and newly recognised.

Two assistants are necessary, and the first should stand on the left of the patient, facing the operator. He should sponge all bleeding surfaces, help to ligature or apply the clamp to the pedicle, and assist in securing divided vessels. He must be ready to sponge or clear away, instantaneously, any fluid or semifluid material escaping from the cyst by its accidental rupture or by leakage from around the trochar. He must be very vigilant with regard to the number of sponges temporarily left in the abdominal cavity, and be certain that they are all removed. A junior assistant must stand on the right of the operator; he can report if there be a free flow of fluid through the tube the moment the trochar is plunged into the cyst. He must hold up the tumour whilst the other surgeons are attending to the pedicle; otherwise a growth of this sort (especially when heavy, with a thin broad pedicle) may slip over the side of the abdomen and tear itself partly away from the pedicle. During the closing of the abdominal wound, he must hold its edges well together in order to keep their peritoneal surfaces in close contact.

Divided vessels in the omentum, parietal peritoneum, or any ther part within the abdominal cavity, should be secured by ilk ligatures, the ends of which may be cut short with perfect afety; this practice is adopted and approved of by most operaors, including even those who object to a similar treatment of he pedicle of the tumour. This introduces the most disputed uestion in the whole history of ovariotomy.

Incomplete intra-peritoneal ligature of the pedicle, the ends f the threads being left hanging out of the abdominal wound, as been justly rejected by all. The cautery, which had fallen nto disrepute, has been employed with good results during the ast two or three years by Dr. Keith. The clamp remains the ost popular agent for the safety of the pedicle, partly from the reat successes of Mr. Spencer Wells, who still distinctly avows is preference for that instrument, and also because it is easily pplied, and involves less time and trouble to an inexperienced perator than the more complicated process of ligature.

Complete intra-peritoneal ligature is adopted, even by its pponents, when the pedicle is too short for the application of he clamp. It is exclusively used by many successful operators t the present date. The author of this paper referred to a conribution of his own, on the history of this practice, in the hirteenth volume of the 'Hospital Reports,' where the effects f ligature were shown to be different to what might be expected rom theoretical reasoning, and far less dangerous. The transixion of a vein constitutes one real peril, and must always be uarded against. Another actual danger, recently pointed out y Mr. Knowsley Thornton, consists in the outer extremity of he stump of the pedicle slipping under the ligature. Fatal æmorrhage is then almost certain to ensue as the large ovarian essels lie along this part of the pedicle. This accident is most iable to occur when the pedicle is very broad, and secured by chain of three or more interlocking ligatures, so that the strain n the outer loop is great, and the broad ligament rendered ense, when the uterus falls back into its place after the operaion. Hence when the border of the broad ligament, external to he stump, is found to be drawn tight after ligature, another hread should be applied by transfixion round the proximal side f the outer border of the pedicle.

The abdominal wound should be closed by passing a threaded eedle from the peritoneal aspect on one side outwards through the integument. The other extremity of the thread should be passed through another needle and drawn from within outwards through the opposite side of the wound. By this method, applied all along the wound, the peritoneal surfaces are kept well in contact, a point of great importance. A set of eight or ten threads passed through a needle at each end, should, in all cases, be ready at hand.

When there is great probability of effusion of serum into the peritoneal cavity after operation, or much chance of considerable capillary oozing, a drainage tube may be passed into the pelvis, and any fetid fluid that rises in it can be removed by a gutta-percha tube fitted to a glass syringe, and can be replaced by a few drachms of weak antiseptic solutions. This practice has been very successfully adopted by Kœbeilé, Keith, and Bantock.

The antiseptic system promises to diminish greatly the mortality after the operation. The author of the paper described an autopsy on a case that had been subjected to operation combined with Lister's precautions, but had died of acute pleurisy (to which disease she had been subject), due, it was suspected, to the great chilling of the body caused by the prolonged action of the steam spray-producer on the exposed abdominal cavity during operation. There was not a trace of peritonitis.

Mr. Eve showed microscopic specimens of chronically inflamed peritoneum from a pig.

February 28.

Mr. Schofield showed a congenital malformation of the leg, in which the tibia was wanting, and the fibula had a rounded head like the radius, which articulated with the external condyle of the femur; the astragalus, os calcis, and scaphoid were represented by a single bone; the internal cuneiform and the first metatarsal bone were wanting.

Mr. Schofield also showed a child which had a pedunculated fibro-cellular tumour hanging from the perineum, which presented a strange resemblance to the penis and scrotum.

Mr. Lockwood showed a dissected specimen of Pott's fracture.

Mr. Kidd read a paper on 'Recent Observations on Inflammation.' The object of the paper was to discuss those points in the subject which were still matters of dispute.

Dr. Sanderson gave the following definition of inflammation: 'Inflammation is the succession of changes which occur in a living tissue when it is injured, provided that the injury is not of such a degree as to destroy at once its structure and vitality.' The subject of pyogenesis was then reviewed, and the arguments for and against pyogenesis from a proliferation of connective tissue corpuscles, stated with especial reference to the experiments of Cohnheim and Stricker on the cornea. Attention was

so particularly drawn to Eberth's experiments on the cornea of
rious animals, which were described at some length. Eberth
owed that in the case of a central keratitis produced by
ustics, pyogenesis depends on the immigration of leucocytes
to the cornea from the conjunctival vessels at the periphery,
was due to their passage from the conjunctival sac into the
argin of the slough. The proliferation of the corneal corpuscles
scribed by Stricker and others was a later stage in the process,
d had for its purpose the regeneration or repair of the injured
ssue. An irritation may, however, produce a proliferation of
e corneal corpuscles without any suppuration, but this process
uld not be regarded as inflammatory. Swetsky's experiments
inflammation of cartilage were then briefly referred to, and
own to agree in principle with Eberth's experiments on the
rnea. In conclusion, the author expressed a hope that the
cts brought forward justified the conclusion, that inflamma-
on and proliferation were distinct processes, the former being
sentially destructive in its tendency, the latter being a process
f repair.

Mr. Eve showed some microscopic specimens of inflamed
ornea of frog and rabbit, of inflamed cartilage and inflamma-
ion in epithelium.

March 7.

Dr. Darbishire showed sphygmographic tracings.

Dr. West showed a specimen of cardiac aneurysm at the 'un-
rotected spot,' with congenital adhesion of the two cusps of
he central valve.

Mr Eve showed a specimen of united impacted extra-capsular
racture of the neck of the femur taken from a woman, æt. 64.

Also a micropthalmic eye, and glioma and sarcoma of the
yeballs, with microscopic specimens.

Dr. Matthews Duncan read a paper on 'The Prediction of the Day of Confinement.'

(Abstract of Paper.)

He pointed out at length the wrong method that had been
ollowed, down till recent times, in the pursuit of knowledge
n this subject. It was attempted to base the settlement of this
uestion of the natural duration of pregnancy on theories of its
ependence on lunar influences or on menstrual periodicity or

on other fanciful bases. All such methods were bad in a philosophical point of view, and yielded insecure results.

In consequence of the errors that might arise as to the commencement of pregnancy, and the uncertainty of this limit, no results, however attained as yet, were absolutely reliable. The only good proceeding was to ascertain facts, collocate them, and read the evidence.

When this was done, the result was that pregnancy lasted not more than 275 days on an average. The duration of pregnancy as counted by days was not a normal, or standard, or natural duration, but an average.

The average duration of pregnancy was not that used in the important practice of the prediction of the day of confinement. It was another, namely, the average interval between last menses and parturition. That average was about 278 days.

The prediction of a day in accordance with the average was of little value in a confinement down to days. The variations from the average day were so numerous for a fortnight before and after it, as to make the average not more than a statement of the likeliest day of confinement, variations on either side from it being less and less numerous as it was distanced; yet the variations within a fortnight on either side of the average were abundant, and necessitated a prediction of a month in which confinement might take place, with an increasing likelihood as from either limit the average day was approached. Dr. Matthews Duncan pointed out numerous practical inferences following from these considerations.

March 14.

General Meeting for the election of officers. The following were elected:—Presidents, Dr. West, Dr. Darbishire; Vice-Presidents, Mr. Bruce-Clarke, Mr. Eve; Secretaries, Mr. Griffith, Mr. Heath.

THE

ABERNETHIAN SOCIETY

ST. BARTHOLOMEW'S HOSPITAL.

REPORT OF PROCEEDINGS.

SESSION 1878-79.

BIBLIOTHECA
SEP 80
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LONDON:
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1879.

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HE ABERNETHIAN SOCIETY having determined in Special Meet-
that it was advisable to publish a Report of its Proceedings,
ointed a Committee to carry the project into effect. The Com-
ee therefore drew up the following Rules, which were accepted
he Society at the General Meeting:—

1. With the approval of the Editors (of the Hospital Reports), that the Proceedings of the Society should be published in the Hospital Reports as heretofore, but in more detailed form, and that afterwards reprints should be thrown off for distribution among its Members.

2. That the papers for publication be selected by a Committee consisting of the two Presidents, two Vice-Presidents, two Hon. Secretaries, and the Hon. Treasurer.

3. That the reprints shall be stitched in the form of a pamphlet, and shall contain a complete List of the Members of the Society for the last five years, and a Table of Contents shall also be provided, with a printed cover.

4. That copies be distributed, free of charge, to Members who are not of more than five years' standing, and that those of more than five years' standing may obtain copies on payment of one shilling each.

5. That these Rules be also printed in each copy of the Proceedings for the information of Members.

SESSION 1878-79.

OFFICERS.

sidents—Mr. BRUCE-CLARKE and Mr. MOULLIN.

Vice-Presidents—Mr. HEATH and Mr. DINGLEY.

Honorary Secretaries—Mr. DAY and Mr. KING.

Gentlemen who have become Members of the Society during the past Five Years.

4-75.

ie, J.
. J.
A. G.
B.
J. M.
H. F.
Bruce.
e, W.
C.
. W. P.
R.
. S.
lor.

Paget, G. E.
Patterson, G. H.
Roughton, J. W.
Thurland, F. E.
Waylen, S. A.
Weiss, H. F.

1875-76.

Adams, A. P.
Anderson, A.
Ashton, C.
Baker, W. J.
Baker, W. T.
Blaikie, J.
Blakeney, H. F. B.
Bradford, A. S.
Bradshaw, J. D.
Bruce, R.
Burgess, W.
Burlton, A. H.
Colenso, R. J.
Craddock, F.
Craven, R.
Cumming, R. F.
Cuthbert, C.
Cuthbert, W.
Dingle, W. A.
Dixon, G.
Falkner, J.
Gayton, F. C.
Gaze.
Gill, R.
Gipps.
Hart, A. P.
Hasleden, R.
Hooker, C.
Johnson, G.
Kirsop, T.
Langdon, J. W.
Lewis, T. H.

Lillies, H.
Lockwood, C. B.
M'Kee, G.
Mackrell, A. S.
Morse, E.
Moullin, N. M.
Paulley, J.
Plumbe.
Prowse, A. S. W.
Redmayne, R.
Steele, H. F.
Sugden, D. A.
Tait, E. S.
Taylor, W. C. E.
Townshend, K.
Trevan.
Webb.
West, E. de L.
West, W. F.
Wharry, A. J.
Whitley, C.
Wickham, W.
Woodward, F.

1876-'77.

Barratt.
Clark, A. N.
Clarke, C. D.
Coles.
Cooke.
Dismore.
Dumbleton.
Gabriel.
Griffiths.
Harbrook.
Hayward.
Hoeken.
Jackson.
Jolliffe.
Krouk.
Langton.
Liddell.
Maude.
Meade.
Meadon.
Morgan.
Nall.
Nicholson.
Nicoll.
Oakley, A.
Oakley, H.
Ogle.
Payne.
Pearless.
Prickett.
Pycock.
Richardson.
Rowsall.
Shears.
Shephard.
Smith.
Sylvester.
Waldo.
Walters.
Wells.

1877-'78.

Armitage.
Bagshaw.
Boulby.
Brewith.
Buckle.
Burnes.
Chaffey.
Clapp.
Clarke, C. D., jun.
Crow.
Day, D.
Edwards.
Finch.
Franklin.
Gripper.
Haig.
Herringham.
Howard.
Laddell.
Mark.
Marshall.
Milner.
O'Neil.
Outhwaite.
Paget.
Payne.
Preston.
Raymond, J.
Raymond, L.
Reid.
Ross.
Royle.
Shaw.
Spry.
Stead.
Sykes.
Thomas.
Tooth.
Walker, C. R.
Walker, E.
Wheeler.

1878-'79.

Anderson, A. J.
Barling, G. H.
Barnes, G. F.
Bateman, H. T.
Biss, C. Y.
Bowe, F.
Browne, E.
Burn, S. S.
Clarke, E.
Collins, W. J.
Garstang.
Harris, U. A. C.
Holland, B. A.
Hooper, H. W.
Jenkins, E. J.
Jessop, W. H. H.
Jones, R.
King, D. A.
Kinneir, W. E.
Macalister, D.
Nance, A. S.
Nance, H. C.
Nichols, H. P.
Phipps, E. V.
Power, D'A.
Poynder, J. L.
Preston, H. T.
Rice, E.
Rushworth, F.
Rushworth, N.
Saunders, C.
Shelley, C. E.
Spackman, H. R.
Square, W. H.
Stretton.
Taylor, T. P.
Trower, A.
Wilson, J.

PROCEEDINGS

OF

HE ABERNETHIAN SOCIETY

FOR WINTER SESSION, 1878–79.

October 10.

Duckworth delivered the introductory address.

October 17.

Griffith showed a patient who had completely recovered in the right eye after a wound of the sclerotic, with loss of eous humour; and another patient with external strabismus right eye, the internal rectus muscle of the opposite eye aralysed.

Keetley read a paper on 'The Treatment of Inflammation npression,' which will be found in vol. xiv. p. 295 of the al Reports.

October 24.

Heath showed a specimen of aneurysm of the thoracic and nal aortæ from the same patient. The one from the abdo- orta had burst at its lower end behind the peritoneum, the orcing its way as high as the umbilicus between the rectus and the parietal peritoneum.

Wharry then read a paper entitled 'Clinical Notes on s.'

Wharry arranged the varieties of this disease into a number ical groups, and showed that the hereditary predisposition isis is less than is commonly supposed, and concluded by ing in detail the treatment he had found most beneficial.

October 31.

Mr. Lockwood showed a case of miliary syphilide.

Mr. King showed a patient with gangrene of the toes, who previously had lost some fingers from the same cause.

Mr. Lyons read a paper on 'Toothache.'

Toothache, like headache, is a symptom, not a disease, and as such may be symptomatic of many diseases of the teeth; as, for instance, morbid conditions of the tooth-pulp; chronic and acute periodontitis; certain conditions of the dental nerve without external lesion; exostosis; pressure arising from the difficult eruption of wisdom-teeth; dental excrescence; and again the toothache which arises from constitutional causes, such as pregnancy or rheumatism.

A patient may complain of suffering from most violent toothache during the previous night, which ceased suddenly in the morning and has not recurred. In such a case we find the offending tooth decayed, and on passing a probe into the cavity discover a most unpleasant phosphatic odour, but no sensation whatever. There has been acute inflammation of the tooth-pulp; it has passed through the stages of suppuration and gangrene. Another patient may complain of having suffered from a throbbing pain which still continues. It will be remembered in the anatomy of a tooth that the pulp is confined to a chamber. During the process of inflammation the pulp swells, and it is the pressure of the enlarged pulp against the walls which creates the pain. Sometimes there is a protrusion of the pulp through the wall in its chamber into the cavity made by caries. This is not at all uncommon.

Occasionally we see cases of inflammation of the pulp in teeth without external lesion, and this is due to dental excrescence or secondary dentine, which grows from the pulp-chamber wall and encroaches on the pulp, thus producing toothache. Another cause of pain is chronic inflammation of the pulp. In this disease it is not so violent, but is more continuous, and is likely to occur at the slightest irritation or cold.

It is not at all necessary for the pulp to be exposed to cause inflammation; it only requires a carious cavity and deposit of food or other matters in it.

Acute and chronic inflammations of the pulp are the most common causes of toothache, and the remedies suggested for their alleviation or cure are numerous; in fact, all the anodynes have been laid under contribution, and many drugs which are entirely opposite in their action.

As regards the treatment of these diseases, if the inflammation of the pulp has extended into the alveolar membrane, which is indicated by the implication of the neighbouring teeth and periosteum, unless there be a special reason for retaining the tooth, it should be extracted. If the inflammation has not extended so far, various remedies may be applied, and in applying them, as much carious matter as possible should be excavated from the offending tooth. The non-performance of this occasions many failures, and the sacrifice of many teeth.

Arsenic, carbolic acid, and creasote are the principal remedies, and the latter appears to be the most efficacious. If the pulp is not exposed, a crystal of nitrate of silver will often cure the pain in a few minutes. This cannot be used to the front teeth, on account of the discolouration it causes.

Another not uncommon source of toothache is acute or chronic inflammation of the periodontal membrane. A patient is seen with his face very much swollen on one side, his features so much distorted that they are scarcely recognisable. He complains of a dull, heavy, throbbing pain, arising from a particular tooth, which, on examination, is found to be decayed and extremely tender to pressure. The patient cannot bear it to be touched. It is somewhat higher than its fellows, and the gum is very much inflamed around it. This patient is suffering from acute periodontitis, which arises from either constitutional or local causes, it may be either in connection with the latter, or as a sequence of some other affection; but it can also arise from a cold or an accident, such as a blow on the cheek or jaw.

When acute inflammation occurs, an abscess is formed round the region of the affected tooth or teeth. It may burst either at the labial or buccal aspect or into the autrum, or burrow along the hard palate, and open at any point.

With regard to the treatment of this form of disease, it is almost the same as if the periosteal inflammation took place in any other bone. Fomentations and poultices should be applied; but it is advisable not to apply them externally. If an abscess forms it should be opened. In chronic periodontitis the gums can be painted with tincture of aconite or with iodine, and the teeth dressed with carbolic acid. Another form of treatment is extracting the tooth, swabbing the socket with some strong antiseptic, such as carbolic acid or chloride of lime, and replanting it.

An impacted wisdom-tooth is the cause of great pain. Patients are unable to open their mouths beyond a certain degree because of the agony it gives. It arises from the inflammation set up around the ramus and angle of the lower jaw, through the pressure of a wisdom-tooth during the process of its eruption. This affection is due to the form of the bone and not to the tooth, which takes its natural direction; but the space into which it has to force itself is insufficient. The surrounding soft tissues become inflamed and deglutition painful; the motions of the jaw are restricted. After a time the gum suppurates, and the movements of the jaw are then less constrained. If local remedies are not successful the tooth has to be extracted. Exostosis of the cementum of the fang of a tooth is also the occasion of toothache. This pain partakes of the character of neuralgia. It is generally accompanied by caries, or may be the sequence of chronic periodontitis.

The diseases given above are the usual causes of toothache. There are others, which are obscure, and which we are seldom called upon to treat.

November 7.

Mr. Butlin introduced a discussion on 'Erysipelas,' supporting the theory of its constitutional origin and contagious nature, and discussed the modes of its propagation.

November 14.

Mr. Strugnell read a paper on 'Some Points in the Clinical History of Smallpox and Vaccination.'

When about two years ago I commenced the duties of Resident Surgeon to the Highgate Smallpox and Vaccination Hospital, I was entirely ignorant of the clinical aspects of variola, nor was my knowledge of the advantages of vaccination anything but very hazy. I suppose very many of those to whom I am now speaking are in much the same condition that I was then. In our student days we all read about smallpox and vaccination in our text-books, but in this Hospital there are necessarily no opportunities of studying the former by the bedside, and, unfortunately, no means for thorough tuition in the latter. In the hope that I may add, though perhaps only a very little, to your knowledge of these morbid states, I venture to ask you to-night to discuss some points connected with the clinical history of smallpox and vaccination.

We will then, if you please, go at once to the wards and see what we can learn.

Here is a case of well-modified confluent smallpox. The patient is in the scabbing stage. His face is fairly well covered with honey-coloured crusts, most abundant round the alæ of the nose. On the forehead and cheeks some of the pustules have not yet ruptured. Look at them; they are not all of the same size, some being as large as a split pea, others no larger than a pin's head; they have most of them a central portion of a darker yellow than the peripheral; in a few pocks the centre only is at present occupied by the scab. Each pock is surrounded by a bright red areola, and as it is a confluent case, the areola of one pock (as well as the pock itself) runs into that of another, giving the face a flushed look. Along the margins of the eyelids are many pocks. The face is swollen so that the patient cannot open his eyes. Looking more closely, you observe that several of the spots have aborted in the papular stage. The tongue and soft palate are also fairly covered with the eruption: the pocks here are paler than those on the face, and for obvious reasons do not scab. You notice the spots are in many places arranged in a linear manner in threes and fives, sometimes in the form of a crescent: this is more marked, as you see, on the wrists and arms; here the spots are larger (which is not unfrequently the case); they are not so far advanced as on the face, some of them even being still vesicular, nor are they so abundant. The pustules are tense and cone-shaped. The chest and abdomen are less thickly covered than the wrists: the spots in these regions are smaller, and more aborted ones are observed. On the legs, ankles, and feet the eruption is more backward still. You remark here the striking way in which the spots arrange themselves. On this ankle is a distinct circle formed by the union of two separate crescents. This patient happens to have a small sore on the leg, and there the pocks have congregated like flies round a lump of sugar. This case was admitted four days ago on the fifth day of the eruption; it is now, therefore, the ninth day of the disease, counting from the day of appearance of the rash.

Let us learn our patient's history. About four or five days before the eruption appeared he felt 'seedy;' two days afterwards, in the evening, he shivered two or three times; the next day suffered from some pain in the back and also in the pit of the stomach, with the other ordinary symptoms of pyrexia. Forty-eight hours after the first rigor a red mottling appeared, on the face and forearms chiefly, quickly followed by an eruption of papules, hard and shotty. The man felt much easier as soon as the spots were well out. When a child, vaccination had been performed, but there is no history of revaccination. On examining the arms you see three imperfect marks; the scars are small (not so large as a threepenny piece), only slightly depressed, and not well covered with little pin-point depressions.

What will be the probable ending of this case? In about another week the scabbing will be complete in every part of the body; on the face most of the crusts will have fallen off. He will be allowed up, and will then only have to remain in the Hospital till all peeling has ceased.

We will now look at his board. On admission he was placed on milk diet and ordered a black draught, to be followed by an effervescing mixture of bicarbonate of soda and tartaric acid every four hours. When the eruption was becoming pustular, beef-tea was added to his diet, and a mixture consisting of a drachm of tincture of bark with ten minims of dilute sulphuric acid to the ounce substituted for the effervescing mixture. As soon as all fever has left him, the patient will be placed on meat diet, with beer, and all medicine probably discontinued. The scabs are well oiled with carbolic oil, 1 in 10, or with equal parts of terebene and olive oil two or three times a day. His temperature chart shows that during the early part of the scabbing stage the temperature, which had since the appearance of the rash been only about 100°, rose to 101° and 101.5° for a day or two, but soon fell gradually to normal. This, then, is a case of confluent smallpox, well modified, running its course without complication, and with no bad symptom. You will probably see many such in practice.

Now come to the next bed. Here is a case much the same as the one you have just seen, but this patient soon after admission was very delirious. His delirium was noisy and violent. He was continually trying to get out of bed, and if not closely watched would have probably escaped from the ward, and even from the Hospital. He refused nourishment (thinking it poison), and would listen to no attempts to calm him; otherwise the case has done perfectly well. His delirium subsided under treatment, which was a drachm of syrup of poppies every three hours till sleep was obtained. I have tried, I think, all the soporifics in the delirium of the early stage of smallpox, and I find that without doubt this is the best. Opium in any other form does not quiet; chloral is almost inert, but after four or five doses of good syrup of poppies the sufferer becomes less restless, and finally quiets down and sleeps, after which all may be well. Delirium in the early stage of smallpox is often a serious symptom; it frequently means a very severe attack of the disease. If a person who is a heavy drinker be attacked with smallpox, the delirium is generally of a more muttering, busy type; in fact the patient suffers from delirium tremens. It is of great importance to remember this, as the treatment required in these cases is different. I have found it best to get the patient to take solid food if possible, or at least to give him generous diet, with stimulants if necessary; and here opium is often of great service. In the secondary fever delirium may occur, and it is then, I think, a more serious matter. It may mean high fever, some intercurrent lung mischief, or exhaustion from the severity of the disease.

Let us go on to the next patient. You see at once he is not doing well. He is depressed and anxious. The pock, which has reached the pustular stage, is very confluent, especially on the face, hands, and feet. It is pale, pasty-looking, flat, and wrinkled. In parts where the spots are distinct they are of the same size, but not tense and yellow coloured. Here and there you notice bullæ filled with turbid serum. The areola round the spots is dusky claret coloured, and the lips are of a bluish tinge. The spots in this case, where they were discrete, were markedly umbilicated, but as the suppuration increased the central depression was destroyed. The scabs, which are just forming on the face and forearms, are pale, or else dark from blood-staining, and inclined somewhat to a rupial form. The treatment here indicated is eggs, beef-tea, wine; and for medicine, carbonate of ammonia in large doses, with bark. In cases such as this, stimulants are of great service. If this patient does not improve on the four or six ounces of wine he is now having, in twenty-four hours he will be ordered six or seven ounces of brandy instead, increased, if necessary, to ten, twelve, or fourteen ounces in the twenty-four hours. This is evidently a case of confluent smallpox quite unmodified, in a severe form. The man may die. If he have power to rally from the severity of the attack, he will probably soon suffer from numerous cellular abscesses, about the size of a hen's egg, occurring chiefly on the arms, legs, and buttocks; they will form quickly, and will require early and free openings. Their contents will be, at first, sanious pus, or even dark coagulated blood. Gradually each abscess will contain more healthy pus, till at last no more are formed. In many cases as many as twenty or thirty of these abscesses will form. They usually occur in the parts above mentioned, though occasionally attacking the face, rarely involving the joints or internal organs. They may continue to form for two or three weeks. Steel, or bark and acid, is the best medicine; cod-liver oil is often of great service.

Perhaps here we might discuss some of the other rather less frequent complications which may arise in the later stages of smallpox. Pneumonia and pleurisy, as you might suppose, are not uncommon, and beware of giving a favourable prognosis when they occur. I know of no disease in which inflammation of the lung advances with such fearfully rapid strides as it does in a case of smallpox. You examine a patient's chest because he complains of some shortness of breathing, or of some pain in the side. You find slight dulness at the base of one lung, with a fine crepitant râle and probably a friction rub, and in twenty-four hours the man is dying, the whole of that side of the chest being dull to percussion, with bronchial breathing and the other ordinary signs of pneumonia; and perhaps the other lung is already slightly involved. If I were asked which was the less dangerous, pneumonia or pleurisy, I think I should say the latter. I have certainly seen more patients recover from an attack of pleurisy than from an inflammation of the lung substance; this may be partly due to the fact that it is rather more common. I do not mean you to infer that all cases of pneumonia occurring in smallpox are of this fatal type, but I think I am justified in saying that, as a rule, the prognosis is very grave.

Another not uncommon complication is erysipelas, generally (at least in my experience) not very severe, though this is by no means always the case; most frequently involving the head and neck, occasionally the arms and legs.

Sloughing of the skin and cellular tissue has occurred in a few cases, its favourite seat having been the instep. It happens only after very severe attacks of smallpox, and is of course a most serious complication. In a boy who was slowly rallying from an attack of severe unmodified smallpox, the whole of the lower part of the scrotum became gangrenous. The case did uninterruptedly well.

Ulceration of the cornea sometimes occurs during the secondary fever, and is very destructive, frequently involving the whole cornea. Atropine and warm applications to the eye, a blister to the temple, with tonics, wine, and liberal diet form the best treatment. Carefully distinguish between this complication and the pock which may form, in the early stage of the disease, on the conjunctiva—not on the cornea—generally at the inner canthus. This is of no moment; it will probably not even become pustular, and will certainly do no harm.

Not seldom, in confluent cases especially, soon after the scabbing has been thoroughly established, an erythematous rash appears over the whole body; it soon passes off. It is an indication, I believe, of a septicæmic condition. I have known it mistaken for scarlet fever.

Pregnant women generally abort if the disease be very severe. The event usually happens suddenly, and at an early period of the eruption, very rarely accompanied with much hæmorrhage at the time, and in no case yet have I seen flooding to occur afterwards. Of course this accident greatly increases the gravity of the prognosis. I have not yet seen the child born with any marks of smallpox on it. In some instances the infant has been alive, and has not died for perhaps twenty-four hours; this has been the case at least three or four times when the child was only about seven months old. There are one or two interesting questions connected with smallpox and pregnancy which I shall be glad if any member of this Society can decide. A woman seven months 'in the family way' was a patient in the Hospital with a mild attack of confluent modified smallpox. She did not miscarry, and soon after being discharged wrote to me to say she had been deivered of a perfectly healthy child at the full term. The questions arise—(1.) Has that child had smallpox? (2.) Will that child be susceptible to the poison of smallpox? (3.) Will that child be susceptible to vaccination?

We will now proceed to the next bed. This patient has hardly anything the matter with him. There are five or six spots on the face and a few on the wrists and forearms. The trunk is almost free from eruption. The rash is at present in the vesicular stage. Many of the pocks will not develop further, but will dry up or scab; many have already aborted in the papular stage. The man has never felt ill, and beyond a slight feverishness and feeling of malaise before the appearance of the spots, he noticed nothing. It is a mild case of discrete smallpox, well modified.

With this next patient you notice something peculiar about the spots at once; they are completely raised on little bullæ about the size of large white currants, filled with clear serum. This condition did not occur until after the pock had become vesicular; otherwise the case is a very mild one; the spots are discrete, and the patient will do perfectly well. It is not a very uncommon appearance. I cannot give you any reason for the peculiarity; it does not, as far as I have seen, indicate want of power. In some modified cases, usually when the rash is discrete or semi-confluent, the pock is arrested in the papular stage, and remains thus for some while, resolving only very slowly. You will hear this condition sometimes spoken of as the 'horny pock.'

Here is the last patient I shall ask you to look at. You see at once he is fearfully ill, but you remark he has no distinct rash on him, as you have seen in all the other cases. He only came into the Hospital this morning, having been taken ill three days ago. He is very calm and his manner quite collected. He will tell you he is in very little pain, and only feels dreadfully weak and low; still he is dying. You observe the whole of the skin is of a livid red hue, the conjunctivæ of both eyes filled with blood, his sputa is bloody and frothy; there is bloody sordes round the lips and teeth; he is passing blood per rectum, and the urine is deeply blood-stained and scanty. If such an attack of the disease had occurred in a woman, there would have been metrorrhagia as well. The respiration is somewhat laboured and sighing, and the general appearance of the poor fellow indicates great loss of blood. If you were to examine the lungs, you would find the bases dull, with absence of breathing there. The patient will be dead in twenty-four or thirty-six hours, having succumbed to an attack of malignant hæmorrhagic smallpox. Nothing can be done for him; all drugs are powerless. Perhaps his life will be a little prolonged by the large doses of brandy and egg he is having. There are no marks of vaccination on the arms, or perhaps at best one or two very bad ones, though he may tell you he believes he was vaccinated when a baby; he has never been revaccinated. At the commencement of the attack there was very intense pain in the back.

All hæmorrhagic cases are not so severe as the one we have just examined. In some, besides the true variolous pocks, there may be purpuric spots scattered over the body, chiefly over the lower parts of the trunk; in others, the pocks themselves may several of them contain bloody matter; and again, large blebs filled with blood-stained serum may be observed in many parts of the limbs. I have seen all the fingers and toes encased, as it were, in a glove by large blebs. In some hæmorrhagic cases there is violent delirium.

You will probably have remarked how very little pain any of the patients you have seen appear to suffer; the itching of the spots is not excessive, and otherwise, unless there be severe throat complication, they only complain of the stiffness and swelling of the face, and often of the tenderness of the skin.

An important question will perhaps arise in your minds, When is a patient who is convalescing from an attack of smallpox free from infection? I believe not till all desquammation is over. In confluent cases this may take three weeks or more after the scabs have fallen off. In some cases, usually in severely confluent ones, the whole skin desquammates, and the patient has all the appearance of suffering from a bad attack of acute eczema; the scales come off in large flakes, leaving the skin beneath of a bright red. Arsenic will sometimes markedly benefit these cases.

Cases of the following diseases, diagnosed to be smallpox, have been sent to the Hospital:—Rötheln, measles, scarlet fever, varicella, urticaria, herpes, lichen simple and specific, and rheumatic fever. In the first three the rash has usually been mistaken for the somewhat measely-looking rash that so often occurs in smallpox just before the papules appear. Varicella, urticaria, herpes, and lichen, you can understand *may* be occasionally confounded with smallpox in the early stage, especially the first. One case of sub-acute rheumatism was sent up for admission; the practitioner, knowing that much smallpox was in the neighbourhood, suspected his patient had caught the disease because of severe pain in the back. Careful attention to the characters and position of the eruption, to the history, and especially as to whether the patient has been recently vaccinated or not, will generally save you from a wrong diagnosis; but if in doubt, wait a few hours and you will then almost certainly be able to decide.

A patient with syphiltic lichen was admitted into the Hospital, and for some days the case was a puzzle; the spots were few, hard, almost shotty, situated chiefly on the wrists and face. There was a look about them that made one doubtful as to the diagnosis; the history was not of much assistance. There was some slight febrile disturbance, but the strongest argument against the erruption being variolous was that eleven months ago the man had been revaccinated and the scars were visible. The patient was simply ordered the effervescing mixture. After about nine days, as no change had occurred in the papules, two grains and a half of mercurial pill was prescribed to be taken night and morning, and the improvement was at once most marked.

Let me put together a little more tersely some of the points we have been talking over.

1. Pain in the back, mostly in the lumbar region, deep-seated, rarely quite absent; its severity usually corresponding to the severity of the disease, most intense before the appearance of the eruption, absent after the spots are well out.

2. Pain in the pit of the stomach; a symptom of some value in diagnosis.

3. Delirium, of common occurrence in the early stage of the disease, noisy and violent, onset sometimes sudden, adding to the gravity of the prognosis. Occasionally present during the secondary fever, then quiet and muttering.

4. The pock, if firm, tense, with perhaps marked umbilication, filled with clear serum, and afterwards with healthy-looking pus; with the areola round it of a bright red hue, the case will probably do well. If flat, flabby, pasty-looking, the contents bloody serum or sanious-looking pus, with the areola around of a dusky claret coloured hue, perhaps with ecthymatous blebs present, the prognosis should be very guarded.

5. The scabs, if honey coloured, semi-transparent, of a firm consistency, the case is progressing favourably. If rupial-looking, dark-brown (perhaps surrounded by an ulcerating edge), or pale and soft, the case is a dangerous one.

6. Swelling of the face and tenderness of the skin, most intense during the maturation of the eruption, usually showing a fairly severe form of the disease, often accompanied by salivation. They indicate that there is power to ripen the pock, and therefore are of value in prognosis.

7. Chief complications or sequelæ:—Abscesses (usually situated in the cellular tissue of the skin), erythema, erysipelas, sloughing and gangrene, pleurisy, pneumonia, œdema of the larynx.

8. Death may occur in forty-eight hours after the first symptoms from the violence of the poison. In severe hæmorrhagic

cases usually within seven days; in confluent cases generally during the secondary fever; in other cases, again, from one of the many complications.

We will now for a few minutes discuss some points of practical interest in regard to vaccination; and first its influence on a case of smallpox.

Thorough vaccination modifies an attack of smallpox in many ways. There is much less initial fever; the eruption comes out sooner; the spots are rarely confluent, usually discrete, of unequal size, some aborting in the papular, others in the vesicular stage. Scabbing commences earlier, perhaps about the fifth or sixth day of the eruption; sometimes the whole of the rash dries up in three or four days. The secondary fever is very mild, often almost absent. Generally there are no complications; and as the spots do not involve the deeper layer of the skin, there is usually no permanent pitting.

Unfortunately, vaccination is very often anything but thorough, and therefore according to the degree of goodness of the vaccination so is the modification of the attack of smallpox. It is not always easy to decide at first if a given case will be modified or not, and one has often to wait till the eruption has become vesicular before giving an opinion. The papules may be irregular in size and present a modified appearance, but as the case proceeds the vesicles become confluent, and by their characters show that vaccination has not affected the attack.

What are the proofs of thorough vaccination? The only sure one is the presence of good cicatrices. A perfect vaccination leaves a clear, distinct, punctated cicatrix, about the size of a threepenny piece or a little larger, having a fairly well-defined edge. If you find three or four of these on the arms of a patient who is suffering from smallpox, you may be quite certain the attack will be a very mild one. Frequently the cicatrix is a mere scar, and between this and a good mark there is every gradation. This brings us to another point. A primary vaccination in infancy does not ensure immunity from smallpox during a whole lifetime. I believe that every person on reaching the age of fourteen or fifteen should be revaccinated, whether the marks are found to be good or no; and I would make revaccination compulsory by law in much the same manner as primary vaccination is now. It is my firm opinion that if primary vaccination were more carefully performed and revaccination thoroughly enforced, smallpox would be entirely stamped out. How then, you argue, is it that an epidemic of smallpox is more severe among the poor than among the middle and upper classes of a community; and yet, as the children of the poor are taken to a public vaccinator, and those of the richer classes are vaccinated by the family doctor, the former will almost certainly be better protected from smallpox than the latter? Granted; but, putting aside the important matter of hygiene, the chief reason is, I think, because the children of the poor are rarely revaccinated.

If a case of smallpox break out in a house, revaccinate all the inmates at once; it is found that vaccination protects the individual when the stage of areola is reached, which occurs about the eighth day from the insertion of the vaccine virus, and, if this period can be attained before the symptoms of smallpox become manifest, the person (although even having taken the infection of the disease) is safe. The incubative stage of smallpox being twelve days, three days may intervene between the reception of the variolous poison and vaccination with subsequent safety to the person.

You will, I think, see it mentioned in the text-books that if a patient is suffering from any other fever or skin disease, the vaccine virus will not take effect nor offer immunity from smallpox. I will give you my experience on this point and leave you to draw your own conclusions. A patient was admitted into the Hospital with measles; the next day she was sent to the London Fever Hospital; a fortnight afterwards she was readmitted with confluent smallpox, and ultimately died; she had not been revaccinated on her first admission. Since then, twelve cases of other disease have been admitted, all of whom were revaccinated within twenty-four hours; not one of them had smallpox.

Vaccination should be performed in four or five places, and it is advisable to operate on only one arm, as the child can then take the breast and lie on one side without discomfort. I find it quite sufficient to scratch the arm with a charged lancet, hardly drawing blood, and then to rub the lymph over the place. I do not puncture at all now, as I think it causes rather more distress to the infant, and, though it is a small matter, it is quite as well to vaccinate a child without making it cry, if only for the mother's sake. I always make five separate places (arranged like the five in a pack of cards), nearly over the insertion of the deltoid muscle. One word on using charged points. The best plan is to dip the point in water, then shake it so as to remove any superfluous fluid, and after a few seconds take off the moistened lymph with the lancet, and proceed as if using recent vaccine. I would advise you not to trust in vaccinating to any of the various instruments which are advocated; the ordinary lancet is by far the simplest and best. Above all things, do the operation very carefully and thoroughly, remembering that your careless vaccination in his infancy may cost the person his life in after years.

I have carefully refrained from touching on any 'booky' questions (if I may so speak) in connection with smallpox and vaccination, thinking it would be perhaps more profitable if I tried to put before you a few practical points. I feel conscious of the many imperfections of this short sketch; but if it lead to other members of this Society giving us their experience and opinions on this subject, this evening may be, I trust, not altogether barren of result.

November 21.

Mr. Bruce-Clarke read a paper on 'Sympathetic Amaurosis.'

Amaurosis, or blindness, has been divided into various forms, according to its origin, such as cerebral, orbital, &c.

The term sympathetic amaurosis is usually confined to cases in which the blindness seems to be dependent upon the inhibition of the optic nerve. It is a form of blindness which usually depends upon some irritation of the fifth nerve or vagus, and in females often of the sexual organs. Recovery is usually quite complete after a period of greater or less duration. This form of blindness is, as a rule, unaccompanied by any visible pathological changes in the eye.

The fixing of an artificial tooth upon an old stump has been known to give rise to blindness, which vanished as soon as the source of irritation was removed. Blindness, too, has been recorded as the result of impacted fæces, worms, gastric irritation, tumours on the head, splinters in the teeth, &c.; and in all the cases it has vanished completely a few days after the removal of the exciting cause.

In addition to such cases as these, and of much more common occurrence, are the instances of impaired vision during lactation, often associated with ulcers of the cornea. Such cases are usually speedily cured by good food and a little quinine.

In the same category, too, may be placed the cases of epi-scleritis in connection with disordered menstruation, which usually yield very readily to treatment.

In a few remarkable instances, the administration of certain drugs, such as quassia and centaury, has been known to produce blindness.

In all such cases the main difficulty is to detect the source of reflex trouble, and in many it remains undetected until at last nature effects a cure before the seat of trouble is revealed.

November 28.

Mr. Gabb showed a patient who had made a good recovery after fracture of the skull with loss of brain substance.

Mr. Griffith showed a patient with vertical nystagmus, apparently caused by a difference of refraction in the two eyes.

Mr. Heath showed a heart with congenital constriction of the mitral valve, from a woman, aged twenty-one, whose whole development was arrested before puberty.

Mr. Roeckel read his paper on 'Syphilis.'

The author began by considering the points most interesting to students, and, among the first, the diagnosis of a soft from a hard sore. He stated that this diagnosis should be made with the greatest reserve, as the most typical soft sore was liable to become hard on or after the twenty-fifth day. The term 'mixed sore' he thought an extremely bad expression, as there was as much mixing between the soft sore and the infecting chancre as there was in a scrotum between a hernia and a hydrocele. The accident of locality was the only thing they had in common. If it were not so, the mixed sore would be a contradiction to the dualist theory. What would happen if you were to inoculate a person free from syphilis with pus taken from a so-called mixed sore? A soft sore, which would run its course, and twenty-five days later in the same spot an infecting or hard sore. The soft sore might be healed by that time, but the hardness would supervene nevertheless. If a syphilitic subject were inoculated with the same pus, he would gain a soft sore, but no hardness would ensue.

M. Grassi's experiments at the Hotel Dieu on the blood of syphilitic subjects were next considered. He made his analyses before the appearance of secondary symptoms, and found that red blood corpuscles were diminished as low as 170 in the 1000 parts by weight. We had here a simple explanation of the adverse symptoms prevalent in the early stages of syphilis.

Touching next on treatment, the use of caustic was condemned because it could only be used with reason by those people who believed that syphilitic virus set at defiance all the laws of absorption by blood and lymph, and remained intact at the seat of inoculation during the incubative period of twenty-five days or longer. Equally, in a soft sore, we should be as little able to decide the amount of tissue that would be destroyed as we could foretell the line of demarcation in a case of gangrene. It would be as unreasonable to use caustic in the one as to amputate in the other. In the use of mercury, delay was advised until the fact of infection was established, on the ground that the harm done by mercury where no syphilis was present exceeded the good it would do in an illness the duration of which is counted by years, during the few days that might elapse before the fact of infection was established. He next condemned the habit of giving mercury until the gums were touched, a physiological event produceable in any person, whether affected with syphilis or no, and throwing no light whatever upon the influence the drug was exercising on a pathological condition like syphilis.

December 5.

Mr. Heath showed a patient with multiple sarcomata, whose eye had been removed four years before for melanotic disease.

Mr. Dingley showed a patient with hæmorrhagic diathesis, who made a good recovery after fourteen attacks of hæmorrhage from a wound in the hand.

Dr. Marshall read his paper on 'Observations on the Anatomy and Physiology of the Olfactory Organ.'

Until quite recently the nerves of vertebrates, whether cranial or spinal, were described as arising in the mesoblast, and as acquiring their connection with the brain and spinal cords by growing inwards towards these structures, whilst by growth at their opposite or peripheral ends they were brought into contact with their terminal end-organs, motor or sensory. Of the cranial nerves, however, two—the optic and olfactory—were said to differ completely in their mode of development from the others; instead of, like these latter, arising in the mesoblast and only acquiring a secondary connection with the central nervous system, the two nerves in question were said to appear as hollow outgrowths from the anterior part of the brain, and were, by reason of this peculiarity, contrasted with all the other nerves in the body, as being not of mesoblastic, but of epiblastic origin, and as being more properly parts of the brain than nerves in the true sense of the word.

Recent investigations have, however, shown that all the nerves, instead of, as previously supposed, arising in the mesoblast, are in reality outgrowths from the central nervous system, and therefore of epiblastic origin. It becomes now a matter of considerable interest to inquire whether this discovery has confirmed or invalidated the sharp distinction hitherto drawn between the optic and olfactory nerves on the one hand and the remaining nerves of the body on the other. The present paper is occupied with an examination of this point, so far as the olfactory nerve is concerned.

In the first place, accepting for the moment the current account of the development of the olfactory nerve, it is clear that the olfactory can no longer be contrasted with the other nerves as an outgrowth from the brain, inasmuch as we have just seen that all the cranial nerves, without exception, are outgrowths from the brain. Still, however, a distinction of no slight importance remains to be considered, for the olfactory nerve is said to be a hollow outgrowth, while all the other nerves are from their earliest appearance solid. The olfactory is also said to arise much later than the other nerves, and to differ from these in sundry other points of minor importance. These statements have now to be considered in order to determine whether the olfactory nerve is or is not strictly comparable with the other nerves.

In an adult vertebrate, the olfactory nerve is commonly described as consisting of three parts—a proximal hollow portion, presenting all the characters of a hollow outgrowth of the cerebral hemisphere, and actually arising as such; a distal portion, having the structure and appearance of a true nerve; and an intermediate ganglionic enlargement at the point of junction of the two other parts. These three parts are called by Stannius *tractus olfactorius, nervus olfactorius,* and *bulbus olfactorius* respectively. According to the ordinary accounts, the earliest of these three elements to be developed is the proximal *tractus olfactorius,* which is said to appear in the chick as 'a small somewhat elongated vesicle on the under surface of the cerebral hemisphere towards the end of the third day.' Were this account correct, it would indeed be true that the olfactory nerve develops after a type totally different from the other nerves, so different, indeed, as by itself to render futile any attempt to establish a strict comparison between the olfactory and the remaining cranial nerves.

However, a careful investigation of the early stages of development has shown that the ordinarily received accounts are erroneous. In the chick, the third or distal element, the *nervus olfactorius* of Stannius, is the earliest to be developed; it arises in exactly the same manner as the other cranial nerves, and agrees completely with them in general relations and in histological structure; it is clearly recognisable at the fiftieth hour of incubation, at which date it differs in no appreciable manner from the other cranial nerves. The proximal element, the hollow outgrowth of the cerebral hemisphere, the *tractus olfactorius* of Stannius, does not appear till towards the close of the seventh day, and is even at that late period extremely small. What has been described by various observers as the olfactory vesicle on the third day is in reality merely the depression of the external epiblast forming the olfactory pit, the rudiment of the olfactory organ of the adult chick; and the mistake appears to be due to the authors thereof having relied exclusively on surface views of whole embryos to the neglect of the method of investigation by means of sections.

As in the chick, so in the dogfish the olfactory nerve proper, the *nervus olfactorius,* arises very early; at the same time, in fact, as the other cranial nerves, and in precisely the same manner. And again, as in the chick, the olfactory vesicle, or *tractus olfac-*

torius, does not appear till an exceedingly late period of development, investigations on other vertebrate embryos, including the salmon, trout, lizard, frog, and axolotl, have all led to the same result. It would therefore appear to be established that the olfactory nerve does not differ in its early stages in any appreciable manner from the other cranial nerves; and that the olfactory vesicle either does not appear at all, as in the trout, or else appears so exceedingly late that its existence can in no way militate against the establishment of a complete homology between the olfactory and the other cranial nerves.

The olfactory must therefore be considered as the most anterior of the true cranial nerves. Such being the case, it must have very definite relations to the most anterior segment; and, in fact, arguments of considerable weight can be adduced in favour of considering the olfactory organ itself as the homologue of a visceral cleft or gill slit, and the olfactory nerve as the segmental nerve whose branches supply the opposite sides of that cleft in the manner well known as characteristic of the segmental nerves in the remaining part of the head.

December 12.

Dr. West read his paper on 'Cough, its Causes and Treatment.' Dr. West described the mechanism of cough, and explained its cause in the various diseases of the respiratory apparatus.

January 16.

House Physicians' Evening.—Discussion on Typhoid Fever.

The House Physicians—Mr. Kidd, Mr. Heath, Mr. Holland, and Mr. Steavenson—gave details of the cases, 140 in number, which had been in the Hospital during the past nine months—mentioning the most interesting points in connection with these cases, together with the chief complications and sequelæ.

From April to December 1878 there were thirty-two cases of typhoid fever in Dr. Southey's wards, of which twenty were males and twelve females. Twenty of the cases were admitted between the end of August and the end of October. Most of the remaining cases occurred in November and December, whilst from April to September there were only five or six. The youngest patient was a girl aged two years, the oldest a man aged thirty-eight years. The following table shows that although there was at least one case for nearly every year from two to twenty-four, yet nine of them, or twenty-eight per cent. of the whole, occurred in the five years from nineteen to twenty-three.

	1	2	3	4	5	6	7	8	9	10	11	12	13	Age of patient.
M.	...	...	...	...	1	1	...	...	...	...	...	1	1	No. of cases.
F.	...	1	...	1	1	1	...	1	1	...	...	...	...	
	14	15	16	17	18	19	20	21	22	23	24	25	26	
M.	1	1	1	1	1	2	...	1	...	2	1	...	...	
F.	...	...	...		...	...	1	...	2	1	...	...	1	
						5 years 9 cases, 28 per cent. of whole.								
	27	28	29	30	31	32	33	34	35	36	37	38		
M.	...	...	...	...	...	1	...	1	...	...	...	1		
F.	...	...	...	1	...	1	...	...	...	...	...	...		

On admission it was found difficult in the greater number of cases to fix the exact day of the disease, but as far as could be made out most of them were admitted from about the sixth or seventh to the tenth day. A few patients in whom the disease began with more violent symptoms were admitted earlier, one on the third, two on the fourth, and one on the fifth day.

Two patients—the only two that had hæmorrhage from the bowels, were admitted later, one at the end of the third week, in an extremely feeble state. Copious hæmorrhage came on after eight days, ending in death in twelve hours. This patient's temperature throughout was very high, varying between 104.5° and 105.5°. In fact, he was one of the few patients in whom a high temperature was at all a marked feature of the disease. The other patient was admitted in the fifth week. On the day of admission he had two attacks of hæmorrhage, losing perhaps two pints of blood, but this was effectively controlled by a mixture of acetate of lead and opium. He had no further bleeding, but his convalescence was prolonged, and although interrupted by an acute attack of tonsillitis, he eventually recovered completely.

The evening temperature on the day of admission in none of the cases was very high—the highest being 104.8°, in a patient admitted on the ninth day. In very few cases was the temperature very high for many days together. In fact, in four only was it ever above 105°. Two of these patients died, the others recovered after a prolonged convalescence. The state of the bowels varied greatly in the different cases, constipation being marked in six; moderate diarrhœa, from three to six stools in the twenty-four hours, occurring in eighteen cases, whilst in eight only was the diarrhœa profuse.

Rose spots were abundant in eight cases, few were visible in thirteen, whilst in eleven there were none at all. Two patients showed petechiæ. In one case — the patient who died from hæmorrhage—in addition to the rosy, lenticular spots, there was an abundant subcuticular mottling over the whole body, and on the back, abdomen, and inner sides of the thighs there were many distinct hæmorrhages. The other patient was a woman aged thirty years, who, though dangerously ill for many days, eventually recovered.

Delirium at night occurred in most cases, but in two only was it prolonged and severe and continued during the day, and it is worth noticing that this occurred in the two patients who had the purple mottling of the skin before mentioned, and in whom the nutrition and circulation of the brain was probably as much affected as that of the skin. In one of these cases a condition of imbecility followed on the delirium, and continued until the end of the eighth week, long after the patient was convalescent, when his friends took him home because he had been removed to Casualty Ward on account of the noise he made. Five weeks later he came again to the Hospital to show himself, and he appeared quite well in mind and body.

Deafness was well marked in six cases, but all recovered except one, the patient last mentioned, who had an abscess in right ear which burst and discharged externally. He had previously had mischief in the same ear, and had been deaf in it for some years. The delirium was, of course, in this patient looked at with suspicion for some time, as he might have had some meningeal inflammation commencing at the temporal bone, but he had no subsequent signs of irritation of nerves or other signs of meningitis, so that it was probably due directly to the fever and consequent alteration in circulation and nutrition of the brain.

Some of the chief sequelæ were—

1. Periostitis of the shin, which occurred in two patients. Abscesses formed and were opened; recovery was complete; no necrosis followed.

2. Thrombosis of the external popliteal vein occurred in one case; the patient made a good recovery.

3. Three patients had rather severe tonsillitis, a frequent affection, as mentioned by Trousseau.

4. One boy at the end of the third week had sudden and general œdema without albuminuria. This lasted three or four days, and disappeared completely. It did not seem to affect his

general condition at all; in fact, he was cheerful, and said he felt quite well the whole time.

5. Abscesses occurred on the scalp of one patient and on the cheek of another.

6. Imbecility followed in one case, as before mentioned, but the patient recovered completely.

Relapses.—Two patients had each one mild relapse. Fresh spots appeared in both, but the temperature was normal again at the end of a week.

Three-fourths of all the cases were convalescent about the fifteenth or sixteenth day.

Treatment.—As a rule, patients were put on the ordinary milk diet of the Hospital, with beef-tea, essence, eggs (or stimulants), as the necessities of the case required; but, as a rule, stimulants were not given, or, if at all, not until the end of the second or beginning of the third week of the disease. The conditions which were taken as indications for brandy—which was the chief stimulant given—were a feeble, very rapid, and perhaps intermittent pulse; an absence of the first sound at the apex of the heart; signs of great muscular debility, and congestion of the bases of the lungs. The quantity given was from three to six ounces a day, the quantity being diminished gradually as the condition of the patient improved. It was frequently found that when the tongue became very dry, and continued so for a day or two, that a little brandy with the milk seemed to moisten it again, and help it to regain its natural condition, probably by stimulating the gastric mucous membrane to more healthy action. In children stimulants were very little used, and only in the worst cases. In them wine was generally preferred to brandy, partly perhaps because they liked it better, partly because it seemed to suit the digestive system better, and to be less exciting than brandy.

Treatment by Drugs.—In nineteen cases patients were treated with sulpho-carbolate of sodium in from 5 to 15 grain doses every six hours. In six cases sodæ salicylate in from 5 to 10 grain doses was administered every four hours. Five patients had the Hst. acidi nitro-hydrochlorici of the Hospital Pharmacopœia; whilst the other two patients had mixtures containing bicarbonate of soda or potash.

So far as I could make out, the patients treated with sodium sulpho-carbolate did quite as well, but no better, than those treated by the acids. During the height of the fever, the tongue perhaps remained moister in those who took the sodium sulpho-carbolate; but in the convalescent stage the acid, with nux vomica, seemed best suited.

Sodium sulpho-carbolate is said to liberate carbolic and sulphureous acids in the intestines, and thus to act as an antiseptic; but I should think this is extremely doubtful. However, the fact remains that the patients did very well when taking this, as well as the other drugs mentioned.

Baths of various sorts were employed when the temperature of patients rose above 104°. In men in a nervous, restless state, the cold dip was used, *i.e.*, the ordinary slipper bath of the ward was filled with water at about 65°, and brought to the bedside. The patient was then stripped and put in the bath; left there for half a minute, and then put back to bed, and wrapped up in a blanket. This treatment in many cases lowered the temperature often two, three, or more degrees, not immediately, but in from half an hour to an hour afterwards. The temperature, as shown by a large number of charts I made, remained thus lowered for three or four hours, but then gradually rose up to, or nearly to, its former height. It was often found that the cold dip had a very soothing effect on the patient. Those who before it had been hot and restless dropped off to sleep soon afterwards, and always woke more or less refreshed. In women and children the shock of the cold bath seemed too great, and for them, instead of it, tepid baths at a temperature of about 95° were used, in which the patient was kept from five minutes to a quarter of an hour, the water not being cooled down artificially whilst the patient was in it. This mode of bathing seemed equally beneficial as the cold dip in cooling the patients, but it was also found that in these patients too the temperature was lowest, not immediately after the bath, but about an hour after it; and though often from this time the temperature gradually, though usually slowly, rose again, yet sleep was procured meanwhile and often real and permanent benefit to the patient seemed to have been obtained. I may here state that I think all the good that is to be gained from baths can be obtained from one of the two methods here spoken of, and that without any of the danger of pneumonia or hæmorrhage being produced by cooling the patient down with ice whilst he is in the water. This last is, I think, a dangerous mode of proceeding, and although it is generally only in dangerous cases that such treatment is adopted, yet I think that the dangers are greater than the advantages to be gained; in fact, I have seen two cases in which pneumonia followed soon after this rapid cooling, with death in both cases; the pneumonia, I cannot help believing, was caused by the means employed in cooling the body, and I think might have been avoided by the use of tepid baths, which are quite as efficient, as I said before, for permanent cooling, without being attended with any risks.

In one or two cases where the patient was too ill to be moved into a bath, sponging in bed was employed, and I must say that from the apparent comfort it gives to the patient, I am very fond of this, perhaps now old-fashioned, plan of lessening the fever.

Two minor points of treatment, which add considerably to the comfort of the patient, I think ought to be mentioned. One is the cleansing of the tongue, not merely the first thing in the morning, but four, five, or more times in the day, or as often as it gets thickly coated, and especially before giving the patient food, which he relishes then all the more. The best thing for this purpose is, I think, a slice of lemon or the solution of tartaric acid kept in the ward, or the Lotio boracis et potassæ chloratis of the Hospital Pharmacopœia.

The other point is as to the passage of the rectum tube when there is much flatulent distension of the bowels. For this purpose, one of the largest solid india-rubber catheters is attached to a piece of india-rubber tubing, and is then passed up the rectum for about eight or ten inches, whilst the abdomen is gently pressed with the flat of the hand. By this means large quantities of flatus escape and the painful distension subsides. In one patient especially did this means afford great relief. For when, late in the disease, about the beginning of the fourth week (for it was a prolonged case), after the diarrhœa had to a certain extent ceased, the intestines, from paralysis of their walls, had become greatly distended, the rectum tube was passed as directed twice a day, large quantities of flatus escaped, together with a little fluid fæces, the abdomen diminished considerably in size and the patient expressed himself as feeling much more comfortable. I believe that by this means the gas in the small gut as well as that in the colon escapes through the tube, as the ileo-cæcal valve would almost necessarily be wide open. And here I may state that I believe that mere distension of the gut is enough in itself to prolong its return to its normal condition, as when it is so distended its walls cannot be so well supplied with blood, nor can the cicatrisation of the healing ulcers go on so readily; and besides, we know that mere over-distension of a hollow viscus, such as the bladder, is in itself enough to paralyse its muscular coat, so that for many reasons it will be seen that it should be of great benefit to the patient, as in the case above quoted, if cautiously and carefully done. Dr. Southey had seen many such good results before from the employment of this means, but in the case in which I tried it, it was only necessary to adopt it for two days, and once on the third day, when the intestines recovered their lost power and the distension did not recur.

The *diagnosis* in most cases was not difficult to make out. The only case in which it was at all doubtful was in a boy aged seventeen, a milk-carrier, who died from acute tuberculosis. He had been ailing three weeks before admission, and a fortnight before profuse diarrhœa set in, lasting a week. For the last week he had been in a typhoid state, but his diarrhœa had ceased. On admission, he presented many of the appearances of a case of typhoid fever, but he had no spots nor any pain, and but very little distension of the abdomen. His motions were not passed frequently, but when passed they were loose and powdery. For a day or two, considering how prevalent typhoid was at that time, this was looked upon probably as a case of that disease; but then his temperature did not present the ordinary remittent type, and although he had no cough nor any marked signs of consolidation in his lungs, yet his respirations became gradually more and more hurried, so that now the diagnosis was found to be wrong, and the true nature of the disease was discovered. After being in about ten days he died, and at the post-mortem examination the mesenteric glands were found to be caseous, whilst his lungs were stuffed with grey miliary tubercles, and his other organs presented the ordinary appearances of acute tuberculosis.

Remarks.—In conclusion, I think that, considering the small number of deaths that have occurred, the comparative lowness of temperature of most of the patients, and the fact that three-fourths of the cases were convalescent at about the fifteenth or sixteenth day, we must look upon this as a mild epidemic of typhoid fever. Another feature to be noted is constipation, which occurred in more than one-third of Dr. Southey's patients, and I believe even in greater proportion in those of some of the other physicians. Rose spots, too, were not at all uniformly present. A third at least of Dr. Southey's cases had none.

The locality whence most of the cases come should, I think, be carefully inquired into, so that if we find that most of the patients come from one particular quarter, it should be our duty to communicate with the sanitary officers of that district, in order to discover, if possible, the cause of the outbreak of this dangerous disease. I found that a large proportion of Dr. Southey's cases came from the neighbourhood of Bethnal Green, whilst another batch were admitted from near the City Road and Islington. I do not know where the majority of cases in the other wards came from, but if my colleagues have found that they come from the same districts, it should be our duty, I think, to make known the fact to the proper authorities of those districts, in order to find out the cause of this, and prevent if possible a fresh epidemic.

W. Lenton Heath.

January 23.

Mr. Lockwood showed a specimen of pigmentary change in hair.

The specimen of hair shown, presented alternate lengths of light and dark, in such a manner as to make it resemble a porcupine's quill in the arrangement of its colours. It was obtained from the head of a young woman aged twenty-eight She formerly had ordinary fair hair, but in her twenty-third year observed it become darker on her temples. During the next five years the alteration in colour extended over the whole head. The hair was easily seen to present the appearance described above. There are similar specimens in the Museum of the Royal College of Surgeons, Nos. 595 and 535; also in the Museum of St. Bartholomew's Hospital. No. 595 is named 'Atmothrix' (Wilson), from the appearance of the white segment being consequent on the diffusion of gaseous matter in minute globules through the tissue of the hair; No. 535 is named 'Tricho dyschroia,' and the white segments are attributed to the sudden production of air globules, which veil the pigment from view. The specimen in St. Bartholomew's Museum is not described. In the specimen mentioned above, the dark segments were due to accumulations of pigment in the medullary axis of the hair. The white segments present the appearance of ordinary light hair. By soaking in dilute acids the pigment was removed. No appreciable quantity of air could be discovered. Many specimens of normal hair which were examined presented the same peculiarity, *i.e.*, an unequal distribution of pigment, but in a smaller degree. A better name for the specimen than Tricho dyschroia would be Tricho dischroia (*Δῖς*:). A child of this woman's, aged five years, had hair which presented the same peculiarities.

He then read notes on 'Otis's Treatment of Gleet and Stricture of the Urethra,' and exhibited the instruments used for the purpose. (*Vide* paper in Hospital Reports, volume xv., page 157.)

Mr. Garstang read the notes of a case of 'Craniotomy,' and showed the instruments used in the operation.

The patient, a primipara, aged twenty-five, recovered without a bad symptom.

Mr. Bruce-Clarke read the notes of a man, aged fifty-six, who had swallowed a set of seven false teeth, which had become impacted in the æsophagus, just below the cricord cartilage. Mr. Baker passed in Pollock's probang, and, after considerable difficulty, succeeded in dislodging the teeth and bringing them within reach of a pair of long curved forceps, by which they were removed.

January 30.

Mr. Mills read a paper on 'Anæsthetics.'

February 6.

Surgical Discussion—Subject, 'Stimulants,' introduced by Mr. Bruce-Clarke.

The discussion was limited to—

a. Alchohol.

b. Its use in disease only.

c. Whether it be a food or no.

The chief point raised was as to the food properties of alcohol, this being the opinion of the majority of those present.

February 13.

Mr. Heath showed the heart of a man, aged thirty-seven, who died suddenly from pulmonary embolism, which showed a congenital deficiency of the septum ventriculosum, a narrow pulmonary orifice, and the aorta apparently arising from both ventricles.

Dr. Abercrombie showed the heart of a child, aged two and a half years, with much the same malformations, its weight being only four and a half ounces.

Mr. Day showed a twin monstrosity, which he had dissected, to show the relation and condition of the different organs and cavities.

Dr. Harris read a paper on 'Palpitation of the Heart.'

The author stated that the laity and a good many medical men considered that palpitation is sure evidence of organic heart disease, but that in reality it was anything but an infallible diagnostic symptom. He then went on to say that patients who suffer from palpitation generally describe their feelings by such expressions as 'a thumping sensation in the chest;' 'a feeling as though the heart were going to burst' or 'rise up into the mouth,'—all these subjective sensations being very disagreeable; the physical signs which are usually observed in connection with these sensations are:—

An extensive cardiac pulsation, not more marked at the normal apex-beat than elsewhere, reaching upwards sometimes even to the first interspace, more marked to left of sternum.

A slight thrill, sometimes uncertain as to time.

Evident pulsation of vessels of neck.

Flushed face or unusual pallor.

No increase in percussion dulness.

Heart sounds thumping, first sharp and quick, like the second, the 'tic-tic' sounds; sometimes the first or second sound double.

The breathing shallow and rapid.

Going on to the definition of palpitation, Dr. Harris said that there were discrepancies, some counting palpitation simply as increased force of the cardiac contractions, others as increased frequency only, others as an increase both in the force and frequency; at any rate, that there appeared to be two classes of cases:—(1) Where there is increased force, with or without increased frequency; (2) where there is no increase of force. To the first of which belong the increased stroke of an hypertrophied heart; and patients, as a rule, hardly notice this at all, or feel it as disagreeable, unless the hypertrophy is becoming non-compensatory. Dr. Harris considered that true palpitation, being for the most part a disagreeable subjective sensation, only comprised the second class, where, in addition to increased frequency, there very often is irregularity. That one or two explanations have been given of the cause of palpitation—either that the vagi or inhibitory nerves of the heart have been paralysed, or that the accelerator nerves have been over-stimulated, or that both these circumstances have occurred. Again, it is possible to suppose that some poison has, by circulating in the blood, deranged the equilibrium of the cardiac ganglia themselves, independently of, or conjointly with, the other circumstances. As to the general causes of palpitation, the most frequent is *indigestion;* and, roughly speaking, palpitation is more frequently diagnostic of this than of morbus cordis. Generally it acts by pressure from the stomach being filled with gas, principally that which arises from the putrid decomposition of the food. Next to indigestion, *smoking in excess* Dr. Harris considered to be most likely to produce palpitation; and, afterwards, *tea and coffee* when taken in large quantity. Tobacco and tea acting differently to the mechanical or pressure-cause (from distended stomach), probably by their effects upon the vagi, much in the same way as atropine acts. The next variety of palpitation considered was that sometimes observed in Grave's disease, which is now considered to be an effect of disturbance of the accelerator nerves of the heart. The theory that palpitation is due to spasm of the arterioles was next considered, and it was shown that this ought to produce, not increased frequency, but rather slowing of the heart, as the drugs which dilate the arterioles, *e.g.*, nitrate of amyl and nitro-glycerin, produce severe palpitation, so that the nervous palpitation is not unlikely due to watery or not sufficiently corpusculated blood. After a short account of the treatment of the symptom, Dr. Harris epitomised his paper thus:—(1.) *That the symptom of palpitation is hardly ever due to organic disease of the heart.* (2.) *That there are various forms of true palpitation* (or increased frequency without increased force), which may be divided into:—(a.) *mechanical,* (b.) *toxæmic,* (c.) *nervous.* (3.) *That these act in various and distinct ways.*

February 20.

Mr. Bruce-Clarke showed a case in which adhesions of the shoulder, elbow, and wrist joints had been successfully treated by forcible movements under chloroform, after the manner of bone-setters.

Mr. Eve showed dissected specimens of dislocations of the shoulder and hip.

Mr. Rice read the notes of a case of pyæmia after amputation, treated antiseptically, in which the wound throughout presented a perfectly healthy appearance.

Dr. Stowers read a paper on the 'Nature and Treatment of Parasitic Skin Diseases,' and commenced by dividing them into two groups, viz.:—

1. Those due to the presence of an animal parasite.
2. Those associated with the presence of a vegetable parasite, whether cause or effect.

Concerning the parasitic animals which infest the human integument the chief are the entozoon folliculorum, the acarus, the pediculus, the pulex, the cimex, the filaria medinensis, and the œstrus.

1. The Entozoon folliculorum occurs in the sebiferous follicles, and was first discovered by Gustav Simon of Berlin. The animal, belonging to the class Arachnida, presents several forms, which correspond with the different stages of development.

2. The Acarus autumnalis, or harvest-bug, is met with abundantly on chalky soil during harvest-time.

3. Of pediculi there are three kinds which occur upon the human body.

a. Pediculus capitis, or head-louse.
b. Pediculus corporis, or body-louse.
c. Pediculus pubis, or pubic or crab-louse.

Concerning these it is a curious fact that the three species, while differing anatomically from each other, should live in such close proximity to one another, and yet in no case leave their preserves for the purpose of poaching on that of their neighbours. With reference to the common head-louse, Leuenhock had put their power of procreation to the test of experiment. He took two females and placed them in a black silk stocking, which he wore day and night, that they might have the benefit of feeding upon him. He found that in six days each laid fifty eggs without exhausting its store; and in twenty-four days the young were capable of laying eggs themselves; and carrying on the calculation, he estimates that the two females conjointly might produce 18,000 in two months. The author stated that it had been computed that the second generation of a single louse may furnish 25,000, and the third 125,000 lice.

4. Pulex irritans, or flea.

5. Cimex lectuarius, or bug.

6. Filaria medinensis, commonly met with in India.

It is a small worm, and has the power of penetrating and secreting itself in the subcutaneous tissues.

7. Œstrus, or gadfly, seldom attacks the human subject, but its ravages are of common occurrence in cattle and horses.

8. Acarus scabiei, or itch insect, the earliest information concerning which was recorded as far back as the time of Aristotle, 350 years before the Christian era. The male acarus was first described by Kraemer in 1845.

Dr. Stowers next proceeded to describe the second great group, or Dermatophyta, of which the following are most commonly met with :—

1. Achorion Schonleinii, producing disease known as Tinea favosa.

2. Trichophyton, giving rise to—
   a. Tinea tonsurans, ringworm of head.
   b. Tinea circinata, ringworm of body.
   c. Tinea sycosis, ringworm of beard.

3. Microsporon furfur, causing the affection known as Tinea versicolor.

4. Microsporon Audouini, a vegetable parasite, which has been alleged by a few observers to be present in the disease known as Alopecia areata.

After giving a detailed description of each parasite animal and vegetable, Dr. Stowers concluded with a few special directions upon the subject of treatment, and mentioned various formulæ which he had found to be most useful in practice.

February 27.

Mr. Heath showed a patient with paralysis of the external muscles, the iris and ciliary muscle of the right eye, due probably to syphilitic disease in the brain, which was greatly improved by the use of iodide of potassium.

Mr. Gill showed a man with complete webbing of some of the fingers and toes.

Mr. F. Rushworth showed a patient who had recovered very free movement in the knee after a wound, followed by suppuration in the joint.

Mr. Garstang showed a small fibrous polypus which had protruded from the urethra of a woman, from whom it was removed by the ecraseur. It had given rise to considerable hæmorrhage, and was supposed to have been attached to the fundus of the bladder.

Dr. Darbishire read a paper on 'Preventive Medicine.'

March 6.

House Surgeons' Evening.—Subject for Discussion, 'Treatment of Wounds.'

The House Surgeons, Mr. Dingley, Mr. Clarke, Mr. Gabb, and Mr. Burn, discussed freely the various modes of treating wounds and their complications; and whilst agreeing that for certain cases, such as wounds of the peritoneum, of joints, or in the treatment of compound fractures, Lister's plan of treatment was preferable, yet for ordinary wounds, rest, thorough drainage, and cleanliness was equally satisfactory.

March 13.

Mr. Griffith showed a patient with paresis of the ciliary muscle of one eye, coming on five months after a blow.

Also a patient who had been operated on successfully for convergent strabismus, one eye being hypermetropic to 2 D., and the other myopic to 6.5 D., the glasses found useful being + 1.5 D. and — 2.5 D.

Mr. Moullin read a paper on 'Delirium Tremens.'

Delirium tremens, as it occurs in surgical wards, is the outcome of two distinct conditions, of which sometimes one, sometimes the other, has a predominating influence.

The one is the prolonged abuse of a poison, in its real nature narcotic, at once the immediate cause of many of the symptoms, and the source of that characteristic facies, the stamp which marks it as something definite; the other, that condition of profound anæmia which may be taken to be the sum of the influences which have worked together to effect the common ruin—the combined result of defective supply of all that is essential, and increased use of that which is injurious, with the consequent visceral degeneration, and imperfect elimination of waste.

The poison is a narcotic, not a stimulant one; for its effects in all but the smallest doses are phenomena of paralysis, of loss, not of increase, of power in mind as well as body. The increased rapidity of ideas, so far from being the result of a stimulus, is but due to the impairment of those inhibitory forces called reason and will; and is quickly followed by the latter stage of confusion, just as the impaired inhibition manifested in the flushing of the face soon extends to the more delicate and then o the coarser co-ordinating powers. And the senses follow the ame law; dull and dim from the very first, at no time is senation or perception rendered more acute. All the symptoms, n fact, are those of diminished nerve control, of loss of power, ue to a narcotising and not to a stimulating influence.

Now delirium tremens represents the sum of the phenomena f a condition of anæmia which can only be compared with the ebility of convalescence after a continued fever; only they are oloured, as it were, by those of alcoholism, appearing slowly nd acting continuously, but in reality the same as are presented by the acute form.

It is true that acute alcoholism ends in coma, while the haracteristic trouble of the chronic form is its sleeplessness; but the relationship between these two conditions is more close than that between sleep and coma, and they at least as often, in the exhaustion of overwork, succeed each other.

The tremor is the offspring of that impairment of co-ordination present alike in the course of the attack and the recovery from it: the delirium is the natural outcome of a continuance of that involuntary reminiscence which must result from the loss of control over ideas, and accordingly it often recalls previous occupation, while its main characteristic, its 'busy nature,' finds a counterpart often in the senseless persistence and activity of the drunkard.

Hallucinations certainly do not occur in the acute form: possibly coma comes too soon; and the part played by simple anæmia in their production must not be overlooked: possibly they are in great measure due to this, the poison but colouring them.

Equally a phenomenon of diminished nerve power is the hyperæsthesia of this disorder; for even if sensibility is increased (as, for example, in an inflamed finger), sensation certainly is not; nor should the significance of the local hyperæsthesia often present after injury to the spinal cord be forgotten.

For the rest, the vascular dilatation on the face, the loss of arterial pressure, quickened pulse, diminution of heat and the cold clammy skin, are common to both; while the vomiting, gastritis, loss of appetite, headache, dizziness, and tremor which mark the recovery from an acute attack, are the almost constant attendants on the victim of chronic excess.

In short, alcoholic abuse may cause acute and uncomplicated symptoms, or, in a constitution somewhat predisposed, a condition, the delirium ebriosorum, which can hardly be distinguished from the ordinary form. In a victim still more worn out, such excess is no longer needed; the sudden call made on the system by some febrile or inflammatory affection, together with the alcohol already present, is all that is required; while in the last stage, even this may be dispensed with; as the resisting power becomes weaker, the less is needed an exciting cause.

If delirium tremens is, then, in a great measure due to chronic narcotism, surely nothing can be more injurious in its treatment than the use of narcotics, such as opium in large doses? or of a drug such as chloral, which lowers a blood pressure already low enough, and weakens an already enfeebled heart?

Undoubtedly the main reliance must be on stimulants; food as the best; by the rectum if the gastritis is severe; and with food, and as food, alcohol in small doses, never approaching narcotism, and sometimes, if well borne, opium in the same way.

Heroic treatment is utterly out of place; it is of no service to induce coma when sleep is required. Patients, somewhat fortunately, do usually recover, on any treatment, or on none: it is as impossible to cure one as it is to administer an antidote to a confirmed opium-eater.

March 20.

Annual meeting for the election of officers. The following were elected:—

PRESIDENTS, . .	Mr. Bruce-Clarke; Mr. Moullin.
VICE-PRESIDENTS,	Mr. Heath; Mr. Dingley.
SECRETARIES, . .	Mr. Day; Dr. Marshall.

March 28.

Special meeting to receive the report of the sub-committee appointed to investigate as to the application of the funds at the Society's disposal. The sub-committee recommended the investment of surplus funds, and a sub-committee was appointed for this purpose.

WALTER S. A. GRIFFITH, } *late Hon. Secs.*
W. L. HEATH, }

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EDINBURGH AND LONDON

THE

ABERNETHIAN SOCIETY

ST. BARTHOLOMEW'S HOSPITAL.

REPORT OF PROCEEDINGS.

SESSION 1879-80.

BIBLIOTHECA
· JUN 1881 ·
BODLEIANA.

LONDON:
SMITH, ELDER, & CO., 15 WATERLOO PLACE.
1880.

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E ABERNETHIAN SOCIETY having determined in Special Meet-
ıat it was advisable to publish a Report of its Proceedings,
nted a Committee to carry the project into effect. The Com-
e therefore drew up the following Rules, which were accepted
e Society at the General Meeting :—

. With the approval of the Editors (of the Hospital Reports), that the Proceedings of the Society should be published in the Hospital Reports as heretofore, but in more detailed form, and that afterwards reprints should be thrown off for distribution among its Members.

. That the papers for publication be selected by a Committee consisting of the two Presidents, two Vice-Presidents, two Hon. Secretaries, and the Hon. Treasurer.

. That the reprints shall be stitched in the form of a pamphlet, and shall contain a complete List of the Members of the Society for the last five years, and a Table of Contents shall also be provided, with a printed cover.

. That copies be distributed, free of charge, to Members who are not of more than five years' standing, and that those of more than five years' standing may obtain copies on payment of one shilling each.

. That these Rules be also printed in each copy of the Proceedings for the information of Members.

SESSION 1879-80.

OFFICERS.

residents—MR. BRUCE-CLARK and MR. MOULLIN.

Vice-Presidents—MR. HEATH and MR. DINGLEY.

Honorary Secretaries—MR. DAY and MR. KING.

GENTLEMEN WHO HAVE BECOME MEMBERS OF THE SOCIETY DURING THE PAST FIVE YEARS.

75-'76.

P.
A.
J.
T.
H. T. W.
A.S.
J. D.
7.
L. H.
. J.
F.
R. F.
C.
W.
. A.
. C.
3. P.
.
R.

Langdon, J. W.
Lewis, T. H.
Lillies, H.
Lockwood, C. B.
M'Kee, G.
Mackrell, A. S.
Morse, E.
Moullin, N. M.
Paulley, J.
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Prowse, A. S. W.
Redmayne, R.
Steele, H. F.
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Tait, E. S.
Taylor, W. C. E.
Townshend, K.
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Cronk, H. G.
Gabriel.
Griffiths, W. S. A.
Harbrook.
Hayward, T.
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Hockin, G. T.
Jolliffe, W. S.
Langton, H.
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Morgan.
Nall, S.
Nicholson, J. E.
Nicholl, T. V.
Oakley, A.
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Crow.
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Edwards, J.
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Gripper.
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Herringham, W. P.
Howard, H.
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Marshall, A. M.
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Raymond, L.
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Collins, W. J.
Garstang, T. W. H.
Harris, U. A. C.
Holland, B. A.
Hooper, H. W.
Jenkins, E. J.
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King, D. A.
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Bullar, F. W.
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Burke, H. W.
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Colville, E. G.
Crang, J. J. G.
Cooper, W.
Copner, A. L.
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Day, J. L. E.
Francis, H. A.
Fletcher, G. A. C.
Gilbertson, H.
Harper, J.
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Harding, C. O'B.
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Sandeman, D. G. S.
Shore, T. W.
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Strynell, W. T.
Stephen, E. N.
Spark, J.
Square, J. E.
Short, F. J.
Tait, H. B.
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Towlson, H. J.
Travers, G. F.
Tripp, C. H.
Trotter, W. O.
Treherne, F. H.
Toller, C. W. E.
Vos, G. H.
Waller, T. H.
Waring, J. A.
Willett, E. W.
Whitwell, A. F.
Weakley, A. J.
Walker, C. R.
Wedmore, E.
Yeatman, J. W.

PROCEEDINGS

OF

THE ABERNETHIAN SOCIETY

FOR WINTER SESSION, 1879-80.

October 9.

r. Vernon delivered the introductory address, after which a
of thanks was passed, coupled with a request that it might
rinted *in extenso* in the Hospital Reports.

October 16.

r. Bruce Clarke read a paper on the treatment of hæmorrhage.
ıe various means for the arrest of hæmorrhage were first
idered, including ligature, pressure, torsion, acupressure, &c.
llusion was then made to the makeshifts of necessity, and
promptitude that was required in dealing with all such
s.

ıe variety of treatment which could be employed in primary,
rrent, or secondary hæmorrhage was next considered, and
riety of cases quoted to show how urgent was the need of
ng promptly with secondary hæmorrhage. One case,[1] in
h transfusion was successfully employed, was referred to
what fully, and the difficulties which beset this operation
dwelt upon at some length.

October 23.

r. Day read notes of a case of abnormal cerebral sinuses, in
h the right lateral one was absent, and its place supplied
ıe right occipital sinus greatly enlarged.

---

[1] *Vide* St. Bartholomew's Hospital Reports, vol. xv. p. 270.

He also showed an occipital bone, the grooves in which showed the same peculiarity.

Mr. Day then showed some human hair of a moniliform appearance, with regular constrictions and dilations, the medulla being absent at the constricted portions.

Mr. Lockwood then read a paper on syphilis, which will be found at page 277 of the present volume of Hospital Reports.

October 30.

Mr. Griffith showed a specimen of contracted pelvis taken from a girl at eighteen.

Its diameters were—

Antero-posterior,	3 inches.
Oblique, . .	4¼ "
Transverse. .	4½ "

In this case a strong instrument was broken in performing kephalotripsy.

Mr. Griffith also showed a new kephalotrite, designed by Dr. Godson. It differed from those of ordinary construction in being heavier and stronger, and in having a winch-like handle of great power to screw it down.

The following resolution, proposed by Mr. Griffith and seconded by Mr. Coles, was read by the President and passed without discussion:—

'That the Society learns with great regret the unexpected death of Mr. Callender, and desires to place on record its deep sense of the loss the Hospital and the School have sustained thereby.'

Mr. Schofield read a paper on the 'Medical Aspects of Vivisection.'

November 6.

Mr. Doran introduced a discussion on 'Septicæmia and Pyæmia.'

Mr. President and Gentlemen,—When informed by Mr. Bruce Clarke, during the past summer, that the Abernethian Society had decided upon requesting me to choose and to introduce a subject for debate, I at once felt the full extent of the honour the Society had conferred upon me, and at the same time was struck with a deep sense of responsibility as to the choice of a subject.

The subject I have chosen is 'Septicæmia and Pyæmia,' which, when referred to collectively and not separately, I shall speak of as 'blood-poisoning.' It is true that many other diseases deserve to be grouped together under this head, but it is highly convenient for our present purpose to use the expression in this limited sense, which we may do without falling into error, since septicæmia and pyæmia are blood-poisoning in its most literal signification.

Having myself been dresser and house-surgeon to St. Bartholomew's Hospital, I have had an opportuuity of finding out not only what can be learnt by the holders of those appointments, but also what is best learnt under the circumstances—a most necessary limitation. For when house-surgeons or dressers, we have the chance of applying ourselves to the study of certain subjects which will probably never be presented to us in so favourable a manner after our term of office has ceased. I refer to the clinical features and the practical details of surgery. Let the microscope, and, still more, the post-mortem room, be not entirely neglected, but be reckoned of secondary interest by us when house-surgeons. The clinical aspects of the results of injury, the appearances of disease remediable by operative interference, and the practice and perfection of such interference, are what then concern us almost entirely.

I say this, because otherwise we might be spending two hours or more to-night in discussing the vast unsettled question of the germ theory. The most practical part of this subject is the inspection of the germs themselves under the microscope and their cultivation; but this is not work for us. Indeed, as to the rearing of bacteria, I consider it our duty when working at practical surgery to avoid such experiments. It might lead to disastrous results in our patients, and in that way would be more dangerous than the chemist's study of poisonous gases, or the pathologist's investigations into the metamorphoses of the tæniadæ, which, through slight carelessness, has ended in the appearance of tapeworm or hydatid disease in the experimenter.

Let us, then, look upon blood-poisoning clinically, and see how far we can battle with the two terrible diseases which, for this evening, we include under that name. We need not at present talk about prevention, since that would introduce another vast question, the discussion of which might be unlimited. It is a mistake to suppose that we must necessarily talk about the respective merits of the 'antiseptic system' and of 'general attention to simple cleanliness' because we are discussing pyæmia. The house-physicians might spend a good evening here in reasoning on the clinical features of enteric fever without feeling bound to argue about the drainage of towns and the surveying of houses; we will conduct our discussion on the same principles. We will talk about the appearances of patients stricken with blood-poisoning and the steps we can take to avert the great tendency to death in such cases.

During the past six weeks I have paid frequent visits to this Hospital, and asked the house-surgeons to kindly show me a case of blood-poisoning; but fortunately they have not been able to comply with my request, no cases having lately occurred. However, you are prepared, gentlemen, to meet with an instance of blood-poisoning any day. A bad compound fracture may be clumsily dressed, and the lint and bandages allowed to get foul before the patient is brought to you in the surgery, or you may have to take charge of a case in which an operation has involved much damage to internal organs or intricate serous or synovial cavities. Accidents will happen, and patients may always get their wounds contaminated before they can obtain skilled assistance, and no 'system' yet pretends to overcome *de facto* septic infection, however it may claim to keep off blood-poisoning when the precautions can be taken before the wound is inflicted.

Now, the typical case does not seem in a bad way at first; the features of the patient probably express slight shock, or show what we see when a man is smarting from a recent wound, that is, an expression of pain without anxiety. Next day the face is more placid, the temperature has most probably risen a degree or two through conditions known as 'surgical' or 'inflammatory fever.' But in a day or two we somewhat suddenly find that the temperature has risen to 102° or more. The patient's face has assumed an unpleasant aspect; it seems much thinner than it was a few hours before; the expression betokens anxiety, not pain; and on speaking to him, we find him reserved and apathetic, as in the severe specific fevers. I do not think any of us expect to find that there have been rigors. For myself, I should be rather astonished to hear that the patient had shivered. Were I assured that a rigor had occurred, I should not be at all surprised to find that the patient had been subject to ague. An attack of this complaint has often followed an operation, and naturally frightened the surgeon. But even when it commences a week or more after a wound has been inflicted, it develops rigors in a more rhythmical manner than true pyæmia, nor does pus form. In blood-poisoning, developed early after injury, we rarely see rigors, and when they occur within a very few days after operation, we find that suppuration is present. Thus in Case 59 of Mr. Savory's 'Statistics of Pyæmia,' in volume iii. of our Hospital Reports, a rigor occurred two days after operation, followed by death seven days later. Extensive abscesses were found in the liver, lungs, and left orbit; besides, the operation had been performed for necrosis, so that suppuration had existed before the knife was used. Then, to return to our typical case, we see other symptoms said to be typhoid.' Delirium sets in, varying between a mere irrational evity of manner, which is the rule, to very violent excitement, hich is less frequent. Even in these days, the patient gene- ally dies in a few days, often lingering on for several hours fter a steady fall of temperature, which is a very grave symp- om when the general condition of the patient is getting mani- estly worse during the fall.

We are not surprised if the surgical registrar tells us that he ould find 'nothing' at the post-mortem of the case. No pus to be expected anywhere; the blood is almost certain to be ark and to coagulate imperfectly, but we expect no visceral esions. The bases of the lungs always show signs of recent ongestion, according to my personal observations. Yet Billroth sserts that the lungs are normal in these cases, and his expe- ience in autopsies is very great.

Such is septicæmia. Not very long ago a man with septicæmia as considered to be doomed, but it was soon shown that it as neither of necessity deadly nor always acute. Now, even epticæmia in its most fearful forms may be faced by the urgeon, and death averted by active treatment. What is more trange, it may take on a chronic type, without ever assuming he pyogenic nature of pyæmia.

But what is to be done when we have to rescue a man stricken ith septicæmia? Purgatives, salines, and similar remedies ay be necessary, but are at the best quite accessory curative gents. Cleanliness is imperative, but the most perfect dress- ngs will not now save the patient. As to specifics, none are nown. The kidneys, generally impaired in their functional ctivity, we may incite to secret urine, but the patient is not uch benefited when we are successful. Besides, mischief oing on in these organs during blood-poisoning does not always anifest itself by the ordinary morbid appearances in the rine. I have on several occasions tested urine in such cases, nd found no deposit nor any trace of albumen, nor excess of rea or phosphates; and yet, on examining the bodies of the atients after death, I have found mottled, pale, or highly con- ested kidneys. Their condition may not have been sufficiently orbid to incapacitate them from separating ordinary waste aterial from the blood, yet they were not strong enough to liminate from the system the poison that is destroying life. Hence the urine is normal, whilst the kidneys are too weak to ave life by throwing overboard into that secretion material which is worse than common nitrogenous waste.

But there is always one indication in septicæmia that we watch so eagerly, that we soon come to look upon it as more than a mere sign or expression of extremely rapid waste of tissue. This is the great rise of temperature. Now, the explanation of some of the subtle causes of death in blood-poisoning may be screened from us; leucocytes may be useless for nutrition or deadly to the system when damaged in some way by bacteria; but one thing is more certain—the hot blood is taking the lion's share in killing the patient. Germs may affect the medulla oblongata or the walls of the heart, but that the increased heat of the blood may in itself imperil the functional activity of these vital organs there can be no doubt. Now it happens that while we know as yet of no remedy to act directly on germs already scattered throughout the system, the increased heat of the body can be reduced by active treatment.

I mean by wet-packing, by the ice-cap, or by the cold bath. These appliances were first employed by the physician for specific fevers. In rheumatic fever, the results of active reduction of temperature have been, I understand, very good. As to enteric fever, I find from a valuable paper recently contributed to the 'British Medical Journal' by Dr. Collie, of the Homerton Fever Hospital, that in the severe cases the bath was inadmissible owing to its general depressing effect, especially on the pulse, whilst in milder cases the relief was only temporary. Septicæmia bears a certain resemblance to enteric fever, especially when the temperature rises very high. Such cases of septicæmia, judging from Dr. Collie's experience, would be, by homology, unsuited for wet-packing or the bath. But in actual fact this treatment does not depress in cases of blood-poisoning; for the blood and the tissues being cooled, one very bad influence is removed, and the chance of safe elimination of the morbid products increased. All this time, too, the period of the operation or injury is getting more and more distant; the share which shock may have had at first is diminishing; the actual wound may be partially healing. The case is otherwise in typhoid; for whilst in septicæmia we may see spontaneous cure in twenty-four hours or a few days, the specific fever is bound to take its time. Thus when we refrigerate a man in the second week, he is bound to run the dangers of the third; but when we 'pack' in a case of septicæmia, the septic influences may cease in a few hours, during which the patient may keep alive with blood of a normal temperature, yet die if the temperature of his body remains at 105°.

Of the methods of reducing temperature in septicæmia, wet-packing is the best in the very severe cases. At the Samaritan Hospital I have seen cases of patients who, after the removal of ovarian cysts, have suffered from the worst forms of septicæmia, owing to the fact that the cysts had previously been tapped, so that air had been admitted into the abdominal or cystic cavity, and septic influences thereby introduced, rendering antiseptic precautions unavailing. In one instance the temperature rose to 105.8°; on the sixth day the patient had tetanic spasms, and presented in other ways the worst features of blood-poisoning. Packing rapidly reduced the temperature; twice in the two following days it rose to over 105.5°; twice again was wet-packing employed, the last time with permanent success. The relief of all the other bad symptoms every time the temperature was artificially reduced leaves no doubt as to the absolute direct efficacy of packing in this case, at least, and I know of several similarly brilliant examples of a successful struggle with death by this method. But the packing must be commenced immediately the temperature has risen, and the surgeon expecting such a rise must be constantly watching the patient. By such vigilance I have known my senior colleagues, Dr. Bantock and Mr. Thornton, to actually save three lives.

When the temperature rises above 102°, it is advisable at first to try the ice-cap which very often produces the best results, and prevents a rise to 104° or higher, which would indicate a necessity for packing. Some patients feel great comfort after its application; some hate it; but all appear to derive great benefit from it whenever it is applied in time, and not left till the temperature has stood over 102° for several hours. The ice-cap in its most improved form is made with the tubing flat on the inner side, as when the tubes were circular much hot air could remain between the coils. Of all artificial methods of refrigeration it is the most convenient.

When we turn to true pyæmia, we need not say much of the symptoms, for they are so well known to us. Rigors, metastatic abscesses, embolic infarcts, &c., are household words to the modern surgeon. We sometimes observe what may be called a chronic form of septicæmia, typhoid symptoms and high temperature supervening two or three days after operations, and lasting several weeks, without the formation of pus. But, as a rule, the main feature of blood-poisoning late after injury is the formation of pus in certain parts of the body, preceded by rigors.

I am less sanguine about the results of artificial cooling of the body in pyæmia than about the effects of that treatment in septicæmia. Though the shock of the injury has longer passed off in pyæmia, there must have been some mischief lurking in the system for the week or fortnight preceding the first rigor, and this mischief cannot have failed to greatly impair the patient's resisting powers. Besides, when the temperature is lowered, there remains the collections of pus as active foci of secondary infection, as bad as the first septic cause, and not to be influenced by cooling. Fortunately experience has shown that general measures, the cautious administration of stimulants, and the early opening of the more superficial abscesses, which should be well washed out with antiseptic solutions, often succeed in overcoming pyæmia.

Such are septicæmia and pyæmia. The manner in which they should be met by the surgeon affords us quite sufficient opportunities of discussion to very profitably occupy this evening.

November 13.

Mr. Schofield showed some photographs of ichthyosis.

Mr. Hoyle read notes of a case of malignant disease of the right kidney in a girl aged 14.

Mr. D'Arcy Power then read a paper on ferments.

After dwelling upon the importance of the subject from a practical as well as from a theoretical standpoint, it was shown that the ferment was, to a certain extent, comparable with the vital principle. Ferments were divisible into two main groups—the morphological or particulate, such as the saccharomycetes, and the non-morphological, of which the majority of ferments present in the animal body might be taken as the type. A short history of the morphological ferments was then given, and the various theories which have been promulgated in regard to their action were mentioned. The morphological ferments were shown to belong in every case to the vegetable kingdom, whilst the products to which they gave rise were divided into substances which were of commercial value, such as vinegar, alcohol, &c., and those which were simply products of putrefaction, the latter class resulting from the growth of various forms of bacteria. It was also sought to show (on the authority of Hoppe Seyler) that there exists a special unorganised ferment in bacteria and others of the lowest organisms which produces these processes of decay, and thus that in the end all ferments could be reduced to a single class. The schizomycetes occur normally as bacteria in the alimentary canal of man, where they appear to carry on the pancreatic digestion of albumins to the formation of the ultimate products of their decomposition. Turning, then, to the non-morphological ferments, they were classed as amylolytic, proteolytic, and inversive ferments. Of these, the amylolytic ferment occurs as diastase in the vegetable kingdom, whilst a proteolytic ferment, active in an acid medium, has been isolated from carnivorous plants as well as from the common bean. There are also certain ferments which are found in the animal kingdom but which have not as yet been discovered in the vegetable kingdom, and *vice versâ*. Of these, the most important are ferments obtained from the mucus of the stomach, a milk-curdling ferment in the same organ, and the ferment in the pancreas which splits up fats into glycerine and a fatty acid, whilst in the vegetable kingdom are found emulsin or synaptase, myrosin and erythrozyme. The zymogen theory of the formation of ferments by the secreting cells from a common substance in the blood, and the inherent differences in the ferments themselves, was then briefly considered. Lastly, it was shown that some ferments, viz., trypsin and pepsin, were normally excreted, though only to a small extent, by means of the urine.

November 20.

Dr. Ormerod read a paper on 'Medical Electricity.'

The subject of medical electricity may be considered from several points of view, but it is proposed to dwell chiefly on one, viz., its use as a means of investigation. Electricity is of diagnostic value in cases of paralysis, because in some cases the muscles contract under the current like healthy muscles, in other cases their electro-contractility is more or less impaired. Thus, in a case of hemiplegia, the muscles of the paralysed side respond to the faradic current as well as those on the sound side; but in a severe case of facial paralysis the paralysed muscles refuse to contract. Well, with regard to the electro-contractility of paralysed muscles, a generalisation has been made, which forms at least a good working hypothesis. In the anterior horns of the grey matter of the spinal cord exist large ganglion cells connected with the anterior (motor) nerve-roots. These cells are thought to be the centre for a variety of processes—for the nutrition of the muscles, for reflex action, for their electro-contractility, which is a form possibly of reflex action. If, then, these ganglia are destroyed or the connection between them and their muscles destroyed, not only are the muscles paralysed, but they rapidly waste and their electro-contractility disappears. If, however, only the volitional centre (that is, the cerebral) be diseased, or if the connection between this and the spinal ganglion be cut, then the muscle is paralysed, but it does not waste and its electro-contractility remains. We must, however, go further, and distinguish between two kinds of electro-contractility. In the cases of paralysis from lesion of the spinal ganglion or nerve-trunks, the muscle refuses to contract under the induction current; but if we apply the battery current with slow interruptions, it contracts much more readily and to a much weaker current than does a healthy muscle. So, then, we have in paralysis of this kind three facts associated —wasting of the muscle, decreased farado-contractility, and increased galvano-contractility. These modifications of the electro-contractility of muscles are called the 'reactions of degeneration.' Different phases of them are described by Erb, and believed by him to possess special diagnostic and prognostic value. Let us now take some of the principal kinds of paralysis and see how the electro-contractity is modified in them. In paralysis of cerebral origin, no matter what the source of the lesion is, embolism, hæmorrhage, softening, or what not, the electro-contractility of the muscles is not lost. Next, in spinal diseases, suppose a case of angular curvature sufficiently severe to cause paraplegia; the electrical reaction of the muscles will be preserved, for though the connection with the brain is cut, the spinal ganglia and the nerves connecting them with the leg muscles are intact. But in infantile paralysis, which consists in disease of these very spinal ganglia, the reactions of degeneration manifest themselves just in proportion to the gravity of the disease. Progressive muscular atrophy is said to depend upon the same lesion; but here, somehow, the electrical reactions are not quite the same, for the induction current continues to cause contraction of the muscle until the muscular substance is completely wasted, the diminution in contractility proceeding *pari passu* with the atrophy. Next take the case of peripheral paralysis—paralysis due, that is, to lesion of the nerve-trunk after it leaves the cord or the brain. A variety of such lesions may be imagined—pressure on the nerve from an aneurism or other tumour, invasion of the nerve by malignant disease, syphilitic disease, rheumatic disease of the nerve-sheath, wounds, bruises, and many other causes. But in all severe cases of this kind, whatever the cause, the reactions of degeneration appear, and their course is determined by the severity and permanence of the lesion. A different class of cases, however, will doubtless occur to our minds, in which the wasting and the reactions of degeneration are very marked, but in which the cause appears to be constitutional, and to have no local seat—I mean lead-palsy. Recent investigators, however, believe that in these cases the spinal ganglion cells are picked out by the poison, much as they are affected in infantile paralysis; so that according to this view, cases of lead-palsy would be brought under the generalisation which has been mentioned above.

One or two instances may be given of the practical application of these principles. A woman, aged 57, was in Elizabeth Ward with what appeared to be ordinary right-sided facial paralysis. A few symptoms, however, pointed to the possibility of cerebral disease. The electrical test showed that the muscles of the right side of the face would not contract at all under the induction current, while under the battery current, slowly interrupted, they contracted much more readily than the muscles of the left side. This, then, pointed to a lesion of the nerve-trunk, not of the brain, and the subsequent course of the case ratified this view. Again, a middle-aged woman came to the Metropolitan Free Hospital with paralysis of one arm. Her general appearance suggested hysteria as the cause, but the complaint of severe pain and the presence of an herpetic rash along the course of one of the cutaneous nerves made me hesitate as to the diagnosis. However, the contractility of the muscles proved to be normal, so a lesion of the nerve-trunk was excluded, and one day the paralysis got suddenly well. I may also quote a third case, so far as it bears on the present subject, the details of which were published in the Hospital Reports for 1879.

A man, aged 46, came complaining of loss of power in the left arm, with pain in the neck and down that arm. There was soon well-marked paralysis, and in addition the left deltoid and biceps began to waste; their farado-contractility disappeared, their galvano-contractility became augmented. These facts pointed to some lesion of the nerve-trunks, but the subsequent course of events seemed to negative that view. For the other arm became paralysed, then the legs, bladder, trunk, &c., and he died. The post-mortem showed a cancerous tumour springing from the dura mater in the cervical region; it infiltrated the roots of the left brachial plexus, and had thereby caused at first the symptoms of a peripheral paralysis; it also compressed the spinal cord in the neck, and had thereby caused the general paralysis whereof the patient died.

Mr. S. Paget then showed a stethoscope used by Lænnec.

November 27.

Mr. Coles showed a man with paralysis of the left hypoglossal nerve, supposed to be caused by a small tumour in the neck.

Mr. Griffith showed a girl on whom excision of the knee had been performed by Mr. Callender five months previously.

Mr. Griffith showed a specimen of embolism of both pulmonary arteries, from a case of phlegmasia alba dolens with plugging of the iliac veins.

Mr. Gripper read notes of a case of fracture of the skull with concussion of the brain, which ended fatally, and he described the post-mortem appearances.

Mr. Lukis read a paper on the 'Germ Theory of Disease.'

The germ theory of disease is simply this: 'That many diseases are due to the presence and propagation in the system of minute organisms, having no part or share in its normal economy.' Origin *de novo* has no part in it, but belongs to that of heterogenesis. As a rule, these two theories have been mixed up, and Panspermists have upheld the germ theory, whilst Heterogenists have regarded it as retrograde and untenable. This, however, is a great mistake, and has caused endless confusion.

In this paper the subject is treated clinically; endeavours are made to show 'the competence of germs to produce the phenomena of disease, with especial reference to the specific fevers,' and all reference to their true nature, on account of the numerous varieties of opinion on that subject, is omitted.

1. *Phenomena of contagion.*—After the absorption of an infinitesimal portion of a specific poison, followed by a definite period of latency, there occurs a characteristic train of symptoms, on the subsidence of which (as well as during their course) there is an elimination of the poison, which has increased a thousandfold, and is capable of infecting almost an indefinite number of persons with identically the same disease.

No ordinary poison could cause such a series of phenomena. Only two reasonable hypotheses remain—(1) The poison acts as a ferment; (2) the germ theory.

In support of the former theory, the way in which a small portion of oxalic acid can decompose indefinite amounts of oxamide, the oxalic acid itself being indefinitely increased at the same time, has been advanced to prove that a substance capable of producing change in others may during that change be reproduced indefinitely independent of germs. This is, however, found to be a fallacy on close investigation. This physico-chemical theory, too, is inadequate to explain the peculiar development and decline of contagiousness in certain specific stools (cholera, typhoid) after their exit from the body, which the germ theory does easily.

What proof have we as to the existence of germs in disease?

They are very few. (1.) The particulate nature of vaccine lymph; (2.) the spirillum in relapsing fever; (3.) bacteria and vibriones in 'braxy' or 'charbon' and 'malignant pustule;' (4.) 'psorospermiæ' in the 'pèbrine' of silkworms; and (5.) according to Klebs and Tommasi, the 'Baccillus malaria' in agues.

The proof that the solid particles in vaccine lymph are the active principles is twofold—(1.) By dilution, when it is found that the only change is in the increase of the number of unsuccessful inoculations, but there is no decrease of intensity when the poison *does* act; (2.) By diffusion, when it is found that the infection still remains in the deeper layer of the fluid.

It has been argued that the spirillum in relapsing fever is the result, not the cause, of the disease. Why then does it not occur in other fevers?

There is no doubt that 'charbon' and 'pèbrine' are due to germs, and this gives one strong ground for reasoning by analogy in man. These two diseases are uniformly fatal, all contagious fevers in men, however, are not. How is this? It is because the germs do not continue to multiply in the blood, but migrate into the tissues, where they give rise to the characteristic local lesion of the disease; they are, in fact, not only organisms, but parasites. Now, the distinguishing feature of a parasite is that it is propagated only in certain localities, often of very limited extent; therefore for the production of parasitic disease two factors are necessary—(1.) A parasite; (2.) a suitable nidus; and it is this second factor which causes many of the phenomena which, taken together, form apparently such a formidable array *against* the germ theory; such as the different degrees of severity, cessation of febrile symptoms, exhaustion of susceptibility, &c.

2. *Phenomena of the febrile state.*—Place side by side (1) the phenomena of the febrile state and (2) the vital characteristics of germs, and one sees how easily the former might be the outcome of the growth of the latter:—

(2.) Increased nitrogenous waste.	(2.) Mainly composed of albumen.
Increased consumption of water.	They largely consume water.
Increased rapidity of circulation.	They largely consume nitrogen.
Preternatural heat.	They multiply by division.
Rapid wasting.	They live on their host.

Increased waste of nitrogenous tissues is, according to Virchow, due to increased tissue change; but if this is true, there ought to be increased elimination of nitrogen, whereas in many cases (especially when fever runs high) there is decreased elimination. There are three explanations of this:—

1. The changes stop short of urea formation.

2. Urea is formed but retained. Considering that decreased elimination occurs in cases of high temperature, the oxidation ought to be *more* complete, and not *less* so. And, again, why should structurally sound kidneys fail to eliminate urea if it is formed?

3. There is some other agency at work besides increased tissue change. Just such an agency is found in such an organism as the contagium particle is supposed to be, and it is the great consumption of nitrogen by it which causes the rapid wasting of the nitrogenous tissues; increased disintegration playing only a secondary part. The contagium particle seizes the constructive store-albumen on its way to the tissues, so that the wasting of the nitrogenous tissues is due to defective formation. Such being the case, the propagation of the contagium must cause rapid emaciation, unless the supply of pabulum be greatly increased, but this is impossible, for the impaired nutrition of the tissues generally leads (in the digestive organs) to impairment of function, whilst the great consumption of water leads to diminished quantity of the necessary secretions, and thus are produced diminished appetite, impaired digestion, and defective assimilation; the most essential constituents of the blood at the same time being everywhere seized upon at the moment when they are about to be appropriated by the tissues. Salkowski's observations as to the retention of soda salts during fever favour this view, for as soda salts exist chiefly in the serum of the blood, and this is the source from which the germs take up constructive store-albumen and water, the retention of soda is a necessary consequence of their growth. *As a rule*, however, in fevers there is *increased* elimination of urea. How is this if there is really decreased tissue formation? The consumption of nitrogen by the germs takes place chiefly in the minute structure of the tissues in and around the capillaries, so that the protoplasm of the germs and that of the tissues is formed and renewed at one and the same time. Now nutrition consists of two processes—(1) The taking up of new material and (2) the throwing off of old, both of which are contemporaneous. Whilst this simultaneous double action is going on, the germs step in and convert into their own protoplasm so much as they require of the constructive albumen. The formation of retrogressive albumen is equally far advanced; but as no such agency interferes to prevent its completion, this action continues as usual, just as though a normal amount of tissue formation were taking place.

Decreased elimination of urea in bad cases is due to the immense consumption of water by the germs, so that there is not enough left to form urine in sufficient quantity.

Thirst is a very prominent symptom, and to allay this, huge draughts of water are taken; yet the amount of water eliminated is less than normal, the skin being hot and dry, the bowels confined, and the urine scanty. This cannot all be retained *as water* in the system. Parkes imagines that some hygroscopic substance is formed during fever, probably gelatinous in nature, and due to defective metamorphosis. There are two objections to this—(1.) Why should such defective metamorphosis exist? (2.) Can any gelatinous substance produce so great an absorption of water? On the other hand, the immense quantity absorbed by the growth of minute organisms easily explains this phenomenon.

Increased frequency of circulation.—Increased tissue change in any part causes increased flow of blood through it, and consequently, as the germs are all over the body, there is acceleration of the whole blood stream.

Preternatural heat is, by Virchow, considered to be due to changes in the nervous system. Whence these alterations? That the nervous system does play an important part in keeping up normal temperature is certain; that it is often deeply involved during fever is equally so, but it does not follow that all the phenomena of the febrile state result from it—in fact, it is more probably secondary. The growth and propagation of minute organisms in the body, and the changes both in themselves and also in the tissues of the host, are quite competent to explain this phenomenon.

In conclusion, the germ theory is by no means proven, but it certainly is one of the most plausible and most simple of all those relating to contagious fevers, and it explains easily many points that no other theory can adequately account for.

December 4.

House Physicians' Evening.—Discussion on Intestinal Obstruction, introduced by Mr. Holland.

The chief difficulty that intestinal obstruction presented was, he said, the diagnosis, and he recited from memory three cases illustrating this. One a case of peritonitis, in which it was found post-mortem that the cæcum, distended with gas and connected with a very long mesocæcum, had floated up into the left hypochondrium, and, doubling on itself, offered an effectual barrier to the passage of fæces. In another case, diagnosed as chronic peritonitis, it was found post-mortem that the obstruction was due to internal strangulation by an adhesion. In the third case, the appendix vermiformis was found ulcerated. Mr. Cripps recorded the case of a charwoman who had had a slowly increasing lump at her umbilicus for ten years past. She was subject to constipation and had never worn a truss. The hernia was irreducible, and contained hard lumps, probably of omentum. Her bowels acted last on 12th June. On the 20th she suffered from no discomfort, and ol. ricini was administered without effect. She had some pain, on and off, after this, and the skin over the tumour became dusky. On the morning of the 22d, when the patient seemed moribund, an operation was performed under chloroform. The sac was opened and an artificial anus imperfectly formed—imperfectly because the skin was sloughy and adhesions had formed. The slough extended, and was finally removed along with some omentum. She had an attack of erysipelas in the wound, from which she recovered. She died on the 15th July, having lived twenty-five days. The post-mortem showed that the opening had been made into the colon. Now, had no opening been made, the patient must have died much sooner, for there was found obstruction by fibrous bands much lower down in the gut.

Mr. Heath referred to the use of antiseptics in gastrotomy, and spoke of several cases of obstruction he had seen. One of impacted fæces, followed by chronic peritonitis, in which the patient recovered after the use of copious enemata. Another case was that of a boy who was accustomed to overeating, and after one such excess obstruction came on suddenly, and internal strangulation was diagnosed. Mr. Savory operated, and found a diverticular band causing the obstruction. Such bands were, he said, the commonest cause of obstruction in young people. In the case of another boy, general peritonitis was found post-mortem, but there was no cause apparent, though Mr. Heath thought that during life a coil of intestine could be felt through the anterior wall of the rectum.

Mr. Burn mentioned the case of a woman who gave a history of sudden pain followed by obstruction, and stated that previous to this her bowels had been evacuated regularly. Gastrotomy was performed and a malignant stricture found. An artificial anus was then made and the woman recovered.

He called attention to the unfairness of the parallel that had been drawn between ovariotomy and gastrotomy, for while in the former we could choose our patients and our time to operate, no such choice was permissible in gastrotomy.

Mr. Bruce Clarke referred to several cases he had seen; amongst others, that of a woman in whom obstruction was due to impacted fæces in connection with an umbilical hernia. This obstruction was relieved by an enema of Oiij. of olive oil.

Another somewhat similar case died suddenly after partial relief by enemata.

In another case Mr. Savory performed abdominal section, but the patient died, and post-mortem a band was found strangulating the gut.

December 11.

Mr. Coates showed a specimen of battledore placenta from a case of placenta prævia.

Mr. Kendal read notes of a case of litholapaxy and lithotrity, in which Mr. Smith had removed at two sittings fourteen ounces of sand and stones.

Mr. Eve showed a specimen of encysted hydrocele of the cord.

Mr. Eve then read a paper on 'Circumscribed Necrosis of the Extremities of the Diaphyses and of Epiphyses of Growing Long Bones.'

The paper was profusely illustrated by specimens, most of which had been recently added to the Museum. The paper will be found in vol. xv. of the Hospital Reports, p. 129.

January 15, 1880.

This was the first meeting that the Society held in its new room.

Mr. Lockwood showed an aorta, the main branches of which were given off in an unusually abnormal manner.

Mr. Lockwood also showed a dissection showing that the posterior fasiculus of the external lateral ligament of the ankle-joint did not arise from the fossa at the lower end of the fibula, but from the apex of the lower extremity of the bone. He maintained that the ligament only occupied the fossa during plantar flexion of the foot.

Mr. King then read a paper on 'Medicine in its Relation to Physiology.'

This paper will be found printed *in extenso* in the 'Student's Journal' for March and April 1880.

January 22.

Mr. Moullin read a paper on the 'Uses of a Leucocyte.' He pointed out its paramount importance in normal and pathological processes, and thought that insufficient attention was paid to leucocytes, while the less active and unimportant elements connective tissue corpuscles, &c., had great consideration given them. Not only did we ourselves spring from a cell like a leucocyte, but all normal and morbid products were the work of leucocytes.

January 29.

Mr. Chalmers showed a baby with a meningocele the size of a walnut, situated over the posterior fontanelle.

Mr. Heath showed the heart and one lung from the body of a man who was crushed by the buffer of a locomotive engine. Beyond a few bruises there was no external injury, and the only damage done to the bony parts was a fracture of the left clavicle. The lung and liver were much lacerated and the heart was ruptured.

Dr. Steavenson read a paper on the 'Medical Act (1858) Amendment Bill.' This paper has been published as a pamphlet.

February 5.

Medical Discussion on Hysteria, introduced by Dr. Ormerod.

He called attention to the wideness of the subject, and, in a short speech, referred to the various theories as to its causation and its ever-varying clinical symptoms. It was not, as usually supposed, always found in women, but sometimes occurred in boys and young men. An animated discussion followed, turning chiefly on those points brought forward by Dr. Ormerod.

February 12.

Mr. Griffith showed a middle-aged man in both of whose arms the radius was apparently ankylosed to the ulna in their upper portions. The hands could not be supinated, and were maintained in a position of nearly extreme pronation. The muscles were well developed, and he was capable of hard work. The defect was congenital, and one somewhat similar occurred in a brother.

Mr. Bowlby showed microscopic specimens of a tumour of the female breast, removed by Mr. Savory.

Mr. Heath showed a heart with great eccentric hypertrophy of the left ventricle consequent on aortic regurgitation secondary to atheroma of the aorta.

February 19.

Mr. Macready showed a macerated specimen of a fracture into the ankle-joint, in which both maleoli had been broken off.

Mr. Bowlby showed some microscopic sections of a cylindroma, removed by Mr. Willett from the popliteal space of a young man.

Mr. Gill read a paper on the 'Treatment of Acute Pneumonia.'

The subject of the paper was the treatment of acute idiopathic pneumonia: those forms of the disease which occurred secondarily to other diseases or as complications of it, being excluded, viz., pneumonia of typhus, small-pox, and pneumonia occurring in Bright's disease, disease of the heart, &c.

Acute idiopathic pneumonia is known by two signs — 1. Fever; 2. Pulmonary disturbance. Both of these vary in their intensity to a great degree. The exact relation of the one to the other is not known, viz., whether the morbid processes going on in the lung are the cause of the high temperature, or whether the changes in the lung are the expression of a general constitutional disturbance, of which the fever is the prominent sign; and the author is doubtful if the adoption of one or the other view would materially alter the treatment as at present carried out. He is of the opinion that the severity of an attack of acute (idiopathic) pneumonia is regulated by—1. The intensity of the inflammatory process; and, 2. The extent of lung involved in that process.

The nature of the morbid change was then fully discussed, and the aids derived from this study applied to treatment. The consolidated lung offers a barrier to the flow of blood through it; hence more blood is diverted into the normal portion of the same side, and into the opposite lung. The congested lung, in turn, impedes the circulation of blood through it, and as a consequence arterial tension is increased, and so the right side of the heart becomes weakened, because, in the first place, it has to force more blood through a smaller area of lung, and, secondly, from the gradually distended state of the pulmonary arteries, it is more or less encumbered in its action, not being able properly to empty itself.

Thus is explained the most important factor in causing cardiac debility in this disease; and thus also the high percentage of deaths from this cause (cardiac debility). To counteract this evil tendency, stimulants should be administered whenever the heart gives signs of flagging. These signs are rapidity of pulse, weakness of first sound, and irregularity of action. If alcohol is given, it should be given in the shape of brandy in small doses frequently administered, the amount being regulated by the strength of the pulse. If alcohol is not given, carbonate of ammonia is very useful, out of camphor mixture or effervescing citrate of potash mixture; 5 grs. every four hours at first, and this afterwards reduced as strength of pulse increases. The author has observed cases do well both with and without alcohol, and strongly advises the early use of alcohol if the case is likely to prove a severe one, because alcohol has a steady stimulant action, whereas ammonia after some days begins to lose its effect.

Provided the pyrexia is not high, and dypsnœa not severe, the strength of the heart is to be maintained by judicious use of stimulants. But if the dypsnœa becomes grave, what can then be done? The cause of this grave symptom is the overloading of the right side of the heart; this can be overcome by blood-letting; but even this means is only temporary, and may have to be repeated three or more times; and, considering the loss of blood to the patient and the not very certain nature of the remedy, the practice of blood-letting in acute pneumonia is as a rule very dangerous. But are there no cases in which it may do good? Just about the time of the crisis (which is itself very uncertain with reference to day of attack), say fifth, seventh, ninth day, the heart may be greatly exhausted, and if it could be relieved for two or three hours, might entirely recover itself in the fresh conditions in which it is placed (after crisis). In these cases, which are special ones, but sometimes (much more often perhaps than is generally believed) present themselves to the observation of the practitioner, bleeding will do good. Generally, the author thinks it unwise to bleed before the fourth day. On that day and after, bleeding may be resorted to, and may have to be repeated. Four or five ounces should be taken at a time, or a little more if need be; but in all cases there should be unequivocal signs of insufficiency of the right heart, as the blood-letting is directed to relieve this unfavourable occurrence.

These means, then, viz., alcohol, carbonate of ammonia, blood-letting, the author uses for the weakness of the right heart—carbonate of ammonia in children and young people; alcohol in cases which are likely to be protracted; sometimes both alcohol and ammonia, especially if the patient has been but poorly fed before the attack or is naturally weakly. In these latter cases the use of the alcohol is seen in tending to prevent body-waste; blood-letting only in those special cases above mentioned.

But although impediment to the flow of blood through the pulmonary arteries is the most important factor in inducing cardiac weakness, it is not the only one.

The extent of lung surface is greatly diminished by the consolidated lung being impervious to air, the air vesicles being filled with inflammatory products. Hence the remaining normal portion becomes expanded (undergoes a compensative emphysema), to accommodate the increased amount of air now going to it. But even then the deficiency of air caused by inactivity of the inflamed lung is not made up by the excess absorbed by the enlargement of the normal lung; hence less amount of oxygen is absorbed into the system, and, as a consequence, nutrition is impaired. From this point of view the author believes that the air breathed by the patient should be as pure as possible. Ventilation of the room in which he is resident should be seen to, and a continual supply of fresh air ensured.

The third factor in causing cardiac insufficiency is the fever. The pyrexial state is well known to produce tissue waste, and, along with the other organs of the body, the heart suffers.

The fever in most cases of pneumonia does not require special treatment other than that of administering alcohol, which serves the double purpose of being a stimulant and antipyretic, in so far as it retards tissue waste. But if the fever is very high (temperature above 104·8° F.), some other means must be used; and the author is decidedly in favour of cold, either of the so-called ice-packing or the bath. If the latter is decided upon, care should be taken in removing the patient into it; and remembering the temporary slight shock which is caused by immersion of the patient, and also the temporary increase of cardiac action (caused by constriction of cutaneous capillaries), it may be well to administer a small quantity of wine or spirits before immersion, and also after it. The patient should be kept in the bath until the temperature in the rectum is down to normal or near it; he should then be placed between blankets for a few minutes and afterwards carefully dried. If a good result be obtained and the temperature again go up, another bath should be ordered, and so on; but if the result of the first bath be such as not to warrant a second one, ice-packing should be resorted to, and the patient placed in a cool room.

When a case of acute pneumonia comes before us, we should observe the condition of the pulse, the amount of the dyspnœa, and the general condition of the patient, and prescribe according to the treatment mentioned above. Plenty of nutritious food should be ordered; best in small quantities at frequent intervals, so that the stomach be not exhausted by being overloaded; and the bowels should be opened. The author generally gives, at first, ammon. carb., gr. v. ex. hst. pot. cit., and alcohol or not according to the general condition of the patient or the intensity of the pneumonia. If the pneumonia proceeds without any bad symptoms arising, the treatment is continued; but if the heart begins to flag, or the dyspnœa assumes a grave character, then a change of treatment is necessary, as described above; if the fever runs high, this must be checked if possible.

In the stage of resolution some difficulty may be experienced in expectorating the viscid sputa. Infusion of senega is useful in overcoming this difficulty. (Sometimes the pneumonia runs its course without causing any expectoration, all the inflammatory products becoming absorbed, and in young children the sputa are swallowed.) When the stage of resolution is inordinately prolonged, then turpentine is good in exercising a stimulant action on this process. The sputa of acute pneumonia are very viscid, rusty coloured, and contain no air or very little; sometimes they are red from a slight hæmorrhage. This is very rarely of such proportions as to call for interference. When it should happen to be so, then perfect rest on the back, with an ice-bag to the sternum and ice in the mouth, are indicated. The prune-coloured sputa are said to foreshadow a fatal termination. Rarely the pneumonia goes on to abscess; here the patient is to be supported with brandy, food, ammonia, and bark, and the fœtor of the breath counteracted by the carbolic spray. So in the case of gangrene complicating pneumonia.

Not all cases of pneumonia terminate by crisis (and the occurrence of sweating predicates the near approach of the crisis); some end by lysis. In these latter instances the strength of the patient has to be maintained, and small doses of digitalis will be found useful, with quinine and other tonics, to promote recovery.

Before concluding, the author referred to the old treatment of pneumonia by depressants, tartar emetic, and other such-like drugs. He expressed his disapproval of these drugs in so far as their use is not based upon rational grounds. Thus it is very equivocal whether tartar emetic or any other depressant has any direct effect upon the inflamed lung, causing it to undergo resolution; and its undoubted weakening action on the heart is a contra-indication of the use of this drug. The author finally remarked that the tongue might be cleaned and appetite improved by the administration of a small quantity of strychnia and quinine after all fever has disappeared, and expressed a belief that the true method of treatment was to find out the changes which took place in disease and the corresponding clinical symptoms these changes gave rise to; and then to attack the cause in the first place, and, if this be not attainable, to palliate or remove, if possible, unfavourable symptoms.

February 26.

Mr. Dingley read a paper on 'Glaucoma.' He first described the morbid anatomy of the disease and then referred to some of the clinical symptoms, and discussed the various theories of its pathogeny.

Finally, he spoke of treatment, and, after mentioning other methods, gave it as his opinion that there was no treatment equal to that by iridectomy. He read notes of several cases of subacute and chronic glaucoma.

March 4.

House Surgeons' Evening.—Discussion on Tracheotomy, introduced by Mr. Coles.

Surgical cases, he considered, were much more favourable for operation than medical ones. Tracheotomy should never be performed on children under two years of age. The case should be carefully examined, the larngoscope being used when the diagnosis was doubtful. He should use anæsthetics unless the patient were moribund. He mentioned a method of performing the operation with the benzine cautery, but condemned it in consequence of its bad after-effects.

During the operation Siegel's steam-spray, and afterwards Dr. Lee's steam-kettle, should be used.

Mr. Lockwood would operate early, and would rather not give an anæsthetic. Sometimes there were difficulties in removing the tube; he should keep the temperature of the room about 70° F.

Mr. Day thought the difficulties of the operation had been exaggerated. He would operate early to give rest to the inflamed glottis and fauces. He was opposed to the use of anæsthetics, but preferred chloroform to any other. Finally, he advocated the use of special nurses in the after-treatment, instead of volunteer students.

Mr. Bruce Clarke divided the cases into acute and chronic. Under two years of age no patient should be operated on; after that age operation should always be performed to give the patient a chance, and in urgent cases he would operate early. In acute cases he would never give an anæsthetic, but would consider its administration optional in chronic ones.

Mr. Dingley said that during his year of office as House Surgeon there had been thirteen cases. He always made his incision as high as the thyroid cartillage. He liked to use a large silver tube for the first forty-eight hours, after which one of Baker's tubes should be introduced; and he suggested that

Baker's tubes might with advantage be stiffened with an inner coil of wire. In no case would he use an anæsthetic.

Mr. King thought that too much had been made of the difficulties of the operation. He attributed the high mortality in children to the fact of the operation having been generally delayed, and the production thereby of collapse of the lung.

He explained the production of atalectasis by the great ease with which air was expelled through the glottis during expiration, and the difficulty or impossibility of drawing any in during the inspiratory movements on account of the valve-like action of the swollen vocal cords. In a large number of cases of so-called œdema glottidis, he believed the real cause of the obstruction was spasm, which was so easily induced by the contact of cool air with the inflamed, and therefore abnormally irritable, laryngeal muscles. In illustration of this he cited two cases he had recently seen in the post-mortem room. He mentioned, as one of the incidents he had seen follow the operation, surgical emphysema. He attributed this to the incisions through the various layers of structures not having been made of equal length.

Mr. E. Clark thought the trachea should be opened and the tube inserted as quickly as possible, and at the end of an inspiration; he thought a respirator would be a useful adjunct to Baker's tubes.

Dr. Steavenson considered the mortality due to delay. At the Children's Hospital in Ormond Street the mortality was 70 per cent. He kept the temperature of the cot at about 60° F. Baker's tubes required renewing every six months. He narrated a case of dyspnœa in which he had been called upon to perform the operation. The dyspnœa was, however, suddenly and permanently relieved by unexpected parturition.

Mr. Hockin referred to cases in which paralysis of the epiglottis occurred as an effect of tracheotomy.

Mr. Gill thought the dyspnœa was not often due to mechanical causes, and considered the operation of no use in the collapse of the early stage of diphtheria.

Mr. Griffith considered a hole in the roof of Baker's tubes an advantage. He would give no anæsthetic and would operate early.

March 11.

Mr. E. Clark showed a series of sphygmographic tracings, some of which illustrated the signs whereby the clotting of the contents of an aneurysm could be diagnosed by the reappearance of the secondary waves, which had been obliterated on the affected side by the pressure of the aneurysmal cavity.

Mr. Dingley read notes of a case in which a portion of clay pipe (exhibited) had been lodged in the orbit for a considerable length of time, and had finally been discharged through the nose. The piece of pipe was an inch long.

Mr. King showed a patient suffering from atrophy and paralysis of the left serratus magnus and other isolated muscles, as well as of all those supplied by the left musculo-spiral nerve. He said the case was anomalous, the diagnosis resting between Couveilhier's paralysis, lead-palsy, and paralysis a frigore (of Duchenne).

Mr. Lockwood read notes of a case of stricture cured by internal urethrotomy, and he showed the urethrotome, and bougies àboule, and olivare.

Mr. Lockwood also showed microscopic sections of chancres á condylomata.

Mr. Heath read a paper on the 'Uses of Southey's Capillary Drainage Tubes.'

Mr. Heath first described the instruments, consisting of a fine trochar and cannula with shield, and capillary india-rubber tube, and demonstrated from models their mode of use. He then drew attention to the fact that Dr. Southey first introduced these instruments for draining the subcutaneous tissues in anasarca, but that afterwards he extended their use for tapping the chest and abdomen.

The general advantages claimed for their use in paracentesis were—

1. That they were less dangerous, and their use caused less pain to the patient.
2. Their size rendered them especially useful in country practice, as they could be always carried in the pocket-case, and be ready for use on emergency.
3. That the most nervous patient would readily submit to have them used, whereas an anæsthetic was often required with such patients if the aspirator or large trochar were employed.

Mr. Heath then discussed the use of these tubes under three headings:—

1. In paracentesis thoracis.
2. In paracentesis abdominis.
3. In drainage of the subcutaneous tissues in cases of anasarca, &c.

In the first class he detailed cases where they had been used with marked success, and where the patients made rapid recovery.

In the history of one patient, which he gave in full, where there had been rapid effusion, filling the chest, causing great distress, he stated that tapping had been performed, the cannula being left in for twenty-four hours; and several pints of serous fluid having drained off, recovery in a few days followed. He also gave it as his opinion that the tubes might be used with safety whilst effusion was going on, and that in some cases they prevented further exudation; but even if they did not, no harm would result from the tapping.

Then he related cases where tapping and letting off a small quantity only of fluid had started reabsorption, and a cure was soon effected.

Comparing this mode of tapping with that by the aspirator, he gave reasons for thinking it the safer, and argued that it was more rational to let fluid off slowly from the chest, that had been gradually filling and causing collapse of the lung, than to take off suddenly from this organ pressure that had been accumulating for several days. In the latter case, he stated that the lung was far more likely to collapse partially or completely when aspiration was discontinued, than if the pressure were taken off gradually, and the lung allowed time to resume its natural size; newly formed blood-vessels on the pleura were very apt to be ruptured by the sudden letting off of the whole of the fluid contained in the pleural cavity, and that the lung was far less likely to be wounded by the cannula than by the aspirator; and mentioned a case where he had seen this accident occur when the aspirator with a pointed needle was used.

The tubes were found unsuitable for tapping in cases of empyæma, as pus would not run freely through them and they frequently became blocked. In several such cases, he stated, the tubes were tried, but the relief was so slow and the trouble of clearing them so great, that this mode of tapping was given up and other means adopted.

The trochars were generally inserted into the chest in the ordinary situation in the mid-axillary line, for convenience of arranging the india-rubber drainage-tube; but Mr. Heath thought they might with safety be inserted in almost any part of the chest, the situation of the great vessels excepted, even over the pericardium, when there was great distension of the sac. In paracentesis abdominis Mr. Heath recounted the dangers of the operation by the ordinary trochar, and stated that most of these, such as death from syncope or peritonitis, were altogether avoided; whilst others, such as wounding of a vessel or the intestines or non-closure of the wound, were very greatly diminished by the employment of the capillary tubes. Rapid refilling of the abdominal cavity, he stated, was much less likely to follow if it were slowly emptied whilst continual pressure was kept up; and he related cases where, after tapping by this means, no refilling had occurred, and the patients recovered.

In other cases where tapping had to be performed on more than one occasion, the patients also recovered. In one case the operation was performed fourteen times, and the patient eventually left the Hospital well enough to undertake the duties of a nurse. The average time that the tubes were left in was from eight to twelve hours, but in some cases they were allowed to remain in two or three days without any ill effects supervening. Mr. Heath believed that any part of the abdomen might with safety be punctured with the trochar; and that if the intestines did happen to be pricked, no harm would probably follow; but, as he pointed out, the length of the instrument would almost necessarily prevent any such accident. The diagnosis of obscure abdominal swellings might, as he showed, be greatly facilitated by these trochars, as cysts or tumours could be tapped, and some of their cells or contained fluid drawn off for microscopical examination. In illustration he related cases where a doubtful diagnosis had been cleared up by such means.

For the *drainage of subcutaneous tissues* Mr. Heath stated that their chief use in clinical practice would be found, and that for this purpose they were of the greatest value; for, as he showed, hitherto the only means of effecting this object had been by puncturing the œdematous part with a lancet and letting the fluid drain off into the bed. This, he maintained, was a very unscientific mode of treatment, and hence the great value of Dr. Southey's tubes in these cases, as they kept the bed dry, and thus prevented the painful eczema which the sodden bedclothes was apt to produce, whilst at the same time it gave great relief to the patient by diminishing the œdema and lessening the painful stretching of the skin. The most convenient points to insert the tubes in the lower extremities were said to be on the outer side of the foot, just above the external maleolus, and on the outer side of the thigh, just above the knee. These places were chosen because then there was no necessity to carry the drainage tubes over the legs so as to reach the receiving vessel by the side of the bed. Mr. Heath said that the softer the œdema the better the legs drained, and that the hard brawny legs drained much more slowly, but that they became softer after these tubes had been inserted for some time. The average amount of fluid that drained away in a day was from a pint and a half to two pints, but he had seen as much as four and a half pints in twenty-four hours from one leg, and seven and a half from both in an extreme case of dropsy. This fluid Mr. Heath proved to contain a large amount of urea, especially in cases of chronic Bright's disease, amounting, in some instances, to .2 to .4 gramme in one hundred cubic centimetres; and the amount of urea got rid of in this way was very considerable

In one case (the patient from whom seven and a half pints of fluid drained away from the legs in the day) the urea was found equal in amount to that passed in the urine (a pint and a half) during the same period. He also proved that peritoneal fluid in these cases also contains a considerable amount of urea, and pointed out that by the use of these tubes in the legs (and abdomen if necessary) the action of the kidneys may be materially aided.

From experience, he stated that the tubes might be left in from two to eight days, but should always be removed on the least sign of irritation being produced. As a means of preventing irritation, he dwelt strongly on the necessity of thoroughly cleansing the tubes before insertion by boiling them in carbolic acid solution (1 in 20) for a few minutes; and he said that if irritation did occur around the tube within a day or two after insertion, it was due to want of thorough cleansing before use. Mr. Heath had also used these tubes to diminish the sudden œdema produced by embolism of the brachial artery in a case of aortic disease, and several pints of serum had drained off in a few hours, with rapid disappearance of the very painful swelling. He concluded by relating the accidents, two in number, that he had seen happen from the use of these instruments. In one case, in the practice of a doctor in the neighbourhood of London, a cannula with a badly made shield, which allowed it to work out partially during respiration, broke off in the muscles of the chest. This, he said, was due to its being too much perforated. The broken piece was, however, easily removed. In the other case, an old cannula with a thread-worn screw was used for tapping the abdomen. It broke away from its shield and was lost in the peritoneal cavity. This accident, however, did not hasten the death of the patient; for though she died a few days later from her dropsy, at the post-mortem examination there was no sign of irritation around the cannula, which was discovered lying free in Douglas's space. Neither of these accidents, he stated, could have happened if properly constructed instruments, such as made by Arnold, had been used.

March 18.

Annual general meeting for the election of officers. The following was the result of the ballot:—Presidents, Mr. Coles, Mr. Heath; Vice-Presidents, Mr. Day, Mr. King; Treasurer, Mr. Savory; Hon. Secretaries, Mr. Herringham, Mr. Hockin; Additional Committee-men, Mr. Berry, Mr. S. Paget.

DONALD D. DAY } *late Hon. Secs.*
DAVID A. KING }

THE

ABERNETHIAN SOCIETY

ST. BARTHOLOMEW'S HOSPITAL.

REPORT OF PROCEEDINGS.

SESSION 1880-81.

BIBLIOTHECA · SEP 1882 · BODLEIANA

LONDON:
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1881.

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THE ABERNETHIAN SOCIETY having determined in Special Meetıg that it was advisable to publish a Report of its Proceedings, ppointed a Committee to carry the project into effect. The Comıittee therefore drew up the following Rules, which were accepted y the Society at the General Meeting:—

1. With the approval of the Editors (of the Hospital Reports), that the Proceedings of the Society should be published in the Hospital Reports as heretofore, but in more detailed form, and that afterwards reprints should be thrown off for distribution among its Members.

2. That the papers for publication be selected by a Committee consisting of the two Presidents, two Vice-Presidents, two Hon. Secretaries, and the Hon. Treasurer.

3. That the reprints shall be stitched in the form of a pamphlet, and shall contain a complete List of the Members of the Society for the last five years, and a Table of Contents shall also be provided, with a printed cover.

4. That copies be distributed, free of charge, to Members who are not of more than five years' standing, and that those of more than five years' standing may obtain copies on payment of one shilling each.

5. That these Rules be also printed in each copy of the Proceedings for the information of Members.

SESSION 1880-81.

—o—

OFFICERS.

Presidents—Mr. HEATH and Mr. COLES.

Vice-Presidents—Mr. DAY and Mr. KING.

norary Secretaries—Mr. HOCKIN and Mr. HERRINGHAM.

dditional Committee-men—Mr. BERRY and Mr. S. PAGET.

OF GENTLEMEN WHO HAVE BECOME MEMBERS OF THE SOCIETY DURING THE PAST FIVE YEARS.

1876-77.

, A. C.
tt, H. J.
, A. N.
, C. D.
D. A.
, G.
, H. G.
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hs, W. S. A.
ook.
ard, T.
ley, J. L.
n, G. T.
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lson, J. E.
ll, T. V.
y, A.
y, H.

, C. A.
ss, M.
tt, M.
k.
rdson, F. L. C. R.
Rowsall.
Shears, C. H. B.
Shephard.
Smith, H.
Sylvester.
Waldo.

1877-78.

Armitage, J.
Bagshaw.
Bowlby.
Brewitt, J. B.
Bathe, A. J.
Chaffey.
Clapp, S. T.
Clarke, W. T. M.
Crow.
Day, D. D.
Edwards, J.
Finch, T.
Franklin, A.
Gripper.
Haig.
Hoyle, W. E.
Herringham, W. P.
Howard, H.
Mark.
Marshall, A. M.
Milner, S.
O'Neil.
Paget, C. E.
Payne, W. A.
Raymond, H.
Raymond, L.
Read.
Ross.
Rumboll, C. F.
Shaw.
Stead, G.
Thomas, W. D.
Tooth, H. H.
Walker, C. R.
Walker, E. G. A.
Wheeler, T. K.
Wyatt, W. T.

1878-79.

Anderson, A. J.
Barling, G. H.
Barnes, G. F.
Bateman, H. E.
Biss, C. Y.
Bowe, F.
Browne, O. A.

Burn, S. S.
Clarke, E.
Collins, W. J.
Garstang, T. W. H.
Harris, U. A. C.
Holland, B. A.
Hooper, H. W.
Jenkins, E. J.
Jessop, W. H. H.
Jones, R.
King, D. A.
Kinneir, W. E.
Macalister, D.
Nance, A. S.
Nance, H. C.
Nichols, H. P.
Phipps, E. V.
Power, D'A.
Poynder, J. L.
Preston, H. T.
Rice, E.
Rushworth, F.
Rushworth, N.
Saunders, C.
Shelley, C. E.
Spackman, H. R.
Square, W. H.
Stretton.
Taylor, T. P.
Trower, A.
Wilson, J.

1879-80.

Bell, W. T.
Bennett, G. H.
Benson, C. R.
Berry, J.
Bewes, E.
Brinton, R. D.
Brooks, J.
Broadbent, F.
Bullar, F. W.
Buckland, T.
Barkley, C. H.
Burke, H. W.
Clark, O. W.
Chittenden, T. H.
Chalmers, A. H.
Colville, E. G.
Crang, J. J. G.
Cooper, W.
Copner, A. L.
Davy, T. G.
Davies, S.
Day, J. L. E.
Francis, H. A.
Fletcher, G. A. C.
Gilbertson, H.
Harper, J.
Howe, J. E.
Hill, W.
Hill, A.
Harding, C. O'B.
Henderson, G. C.
Hewer, J. L.
Jalland, R. W.
Javal, R. Cremiere.
Kendall, T. M.
Ley, H.
Lyndon, A.
Mason, J.
Maturin, B. A.
Misnet, C. J.
Moberly, S. C. H.
Mead, R. W.
Michell, M.
Nias, P. B.
Paget, S.
Parkinson, H.
Pope, F. M.
Partridge, W. T.
Ray, W.
Rice, B.
Risk, E. J.
Read, H. G.
Sandeman, D: G. S.
Shore, T. W.
Slater.
Stevenson, H. W.
Strynell, W. T.
Stephen, E. N.
Spark, J.
Square, J. E.
Short, F. J.
Tait, H. B.
Terry, H. G.
Towlson, H. J.
Travers, G. F.
Tripp, C. H.
Trotter, W. O.
Treherne, F. H.
Toller, C. W. E.
Vos, G. H.
Waller, T. H.
Waring, J. A.
Willett, E. W.
Whitwell, A. F.
Weakley, A. J.
Walker, C. R.
Wedmore, E.
Yeatman, J. W.

1880-81.

Alcock, S. K.
Alexander, F. W.
Andrew, E. O.
Avrill, C.
Back, H. H.
Bailey, C. F.
Bailey, W. H.
Barnard, E. G.
Burn, T. W. B.
Barrett, R. H.
Barryloyeth R.
Barsham, W. O.
Batten, R. D.
Beattie.
Bird, A.
Bontor, S. A.
Campbell, E. K.
Campbell, H.
Calvert, J.
Carter, T. E.
Chamberlain, W. H.
Chambers, H. W.
Chapman, H. C.
Church, B. E.
Churcher, H. R.
Clayton, G.
Collins, O. A.
Collins, W. C. G.
Collyns, R. J.
Cresswell, F.
Dagg, J. A.
Dalley, W. C.
Davies, A. T.
Downing, C.
Evile, F. C.
Featherstonhaugh,
Feeny.
Fenouthet, J. P.
Fernandez, E. J.
Frames, A. C.
Foulerton, A. G.
Fox, H.
Gabriel, L. M.
Gabriel, W. M.
Gardner, H. W.
Gardner, W. T.
Garrod, A. E.

Gaskin, T. L.
Gay, J.
Gell, H. W.
Gilmour, P. G.
Godfrey, C.
Griffin, J. H.
Griggs, A. J.
Guthrie, L.
Habershon, S. H.
Halsted, H. C.
Hartley, R.
Heath C. J.
Hemming, J. J.
Hind, A. E.
Hofmeister, G. B.
Hoole, J.
Hope, E. A. W.
Hunt, B.
Hurry, J. B.
Innes, C. B.
Iredale, T.
Jackson, A. M.
Jacob, A. H.
Jessop, E.
Jessop, J. W.
Jones, C.
Jones, H. L.
Julian, O. R. A.
Julyan, F. H.
Kirkhouse, G.
Laurie, C. R.
Lawrence, L. A.
Leach, H P.
Lyddon, C.
Lyster, A. E.
Macfarlane, A. A.
Maher, C.
Marsh, N. P.
Mason, F. J.
Matthias, T. B.
Maude, A.
Mends, B. S.
Mitchell, H.
Molden, F. J.
Moore, W. F.
Nall, J.
Napier, F. H.
Opie, E. A.
Orr, A. A.
Overend, W.
Page, A. M.
Palmer, S. J.
Parker, H.
Parsons, H. C.
Paterson, W. B.
Pettifer, E. C.
Pollard, R.
Preston, F. H.
Price, A. T.
Pruen, S.
Pullen, P. G.
Rayner, H.
Richards, G. F.
Richmond.
Robinson, L.
Shadbolt, H. P.
Santi, R. P.
Scott, J.
Shadwell, W. H.
Sharman, J. G.
Shaw, C. C.
Simmons.
Sloman, F.
Smith, B. E.
Southcombe, A. G.
Spicer, T. H.
Spilsbury, F. T.
Starr, W. H.
Steedman, J. F.
Stevens, F. J.
Strickland, C.
Thompson, M.
Thorpe, G.
Valpy, C. E.
Vogan, J. N.
Wallis, F. C.
Walsham, H.
Watton, G. A.
Wells, G. L.
White, J. H.
Wickham, G. W.
Williams, E. R.
Wilson, J. G.
Womack, F.
Woods, E.
Wordsworth, W. J.

PROCEEDINGS

OF

THE ABERNETHIAN SOCIETY

FOR WINTER SESSION, 1880–81.

October 7.

Dr. Hensley delivered the introductory address.

October 14.

Mr. Herringham read his paper entitled 'A Dresser's Practice,' illustrated by the following tables:—

An Analysis of nearly 500 Cases, being all those treated as Out-Patients by one Dresser from May 13 to September 30, 1879.

Incised Wounds.	Treatment.	Condition on Application at the Hospital.	Results.
Scalp . . 13	All with water dressing; no sutures.	Nearly all drunk; one done with umbrella.	6 did not return; 7 healed well.
Face—			
Eyebrows 5	Hair sutures in four.	Nearly all drunk.	9 did not return; 1 was for a while erysipelatous, but recovered; 7 healed quickly.
Lips . . 4	Hair sutures in all.		
Other parts 8	3 with carbolic oil. 14 with water dressing.		
Upper limb—			
Fingers . 18	2 with tops nearly off; all with water dressing.	Hardly any drunk; large majority on left side.	1 near joint, stiff finger; 1 into joint, no bad result.
Hands . 9	1 with carbolic acid.		8 did not return; 1 got cellulitis of forearm; recov'r'd.
Rest . 4	8 with water dressing. All with water dressing.		22 did well.
Lower limb, 7	All with water dressing.	1 a wound of the thigh by a butcher's knife.	1 did not return; 6 did well. Crushed toes healed very rapidly.
Neck . . 1	Water dressing.		
Penis . . 1			

ANALYSIS OF CASES—*continued.*

Punctured Wounds.—6, all upper limb. 1 pistol-shot through finger, baring bone, carbolic acid with drainage, speedy recovery. 1 in hand from glandered horse. Same treatment and result. 1 bite of dog. 1 bite of woman.

Burns.—4. *Scalds.*—7. 1 on foot. All the rest above waist. 6 did not return. 5 recovered with Carron oil.

Bruises.—Head and face, 4. Upper limb, 24. Lower, 11. Chest and back, 11. Genitals, 3.

Fractures.—Clavicle, 4. Forearm, 2 (1 greenstick of both bones). 4th metacarpal, 2. Phalanges, 2. Ribs, 5. Nose, 1.

Dislocations.—Shoulder, 2. One man had dislocated the right arm twice, left arm thrice; the other had dislocated the right arm eight times. Phalanx, 1.

Sprained or Bruised Joints.—Shoulder, 1. Elbow, 3, two of which from lifting weights. Wrist, 4. Fingers, 2. Knee, 8, one in a ballet-girl. Ankle, 6. Treated with splints and lotio plumbi. Results good in one-third of the cases. Bad in 2. The rest did not return.

Abscesses.—Mastoid, 1. Dental, 4. Bursa of olecranon, 2, from wounds, the suppuration spread down the forearm. In adductors of thigh, 1, from strain. Arm, 1. Hand, 6. Breast, 1.

Ulcers.—13. All lower limb, 3 of which syphilitic.

Boils.—7. Neck and nates.

Erysipelas and Cellulitis.—Head, 4. Upper limb, 15. Lower limb, 4. Body, 2. Contrasted with the ulcers, shows that the lower limb is prone to diseases of malnutrition, the upper to those of active irritation.

Strains.—5.

Skin Diseases.—Eczema, 19, generally of head; a few of palms. Great variety of forms. Herpes simplex, 9 of penis, 1 of lips; zoster, 2. Lichen, 3. Psoriasis, 2. Impetigo, 3. Acne, 5. Ecthyma, 4. Other forms, 20. Some of the Urticaria cases were chronically recurrent at spring and autumn. Parasites, 21.

Rectum.—Hæmorrhoids, 4. Fistula, 2. Prolapsus, 1.

Testes.—Hydrocele, 1, congenital. Epididymitis, 2. Orchitis, 3.

Lymphatics.—Buboes, 3, 1 from overwalking. Lymphangitis, 4. Strumous, 2.

Bursæ.—Inflammation, 1, patellar. Suppuration, 2, olecranon. 1 on nape of neck in a wine porter.

Ears.—Otorrhœa, 3. Mastoid abscess, 1. Cerumen, 3.

Gonorrhœa.—52. 6 cases from 6 months to 3½ years. Treated in plethoric cases with H.M.S. c. M.S. and warm water; in weakly cases with tonics. Gleets with green tea, lotio plumbi, or copaiba. *Complications.*—Orchitis, 2. Stricture, 2. Balanitis, 1. Rheumatism, 1. When chronic, very intractable. None satisfactory. Most did not return.

Chancre.—10.

Syphilis.—Sores, 4. Rashes, 7. Condylomata, 5. Ulcers, 2. Hereditary, 1.

October 21.

Mr. Bowlby exhibited a case of double anterior and posterior ganglion of the wrist.

Mr. Lockwood read his paper on 'Anatomical Nomenclature.' This paper gave short details of the lives of many men whose names were immortalised in anatomy, Herophilus, Sylvius, Eustachius, Scarpa, Vesalius, Malphighi, Hunter, and others.

He further drew attention to certain anatomical facts hitherto undescribed, among them to 'the small depression upon the temporal bone just above the external auditory meatus, where the pinna of the ear is fastened to the skull by a quantity of strong ligamentous fibres.'

At the lower end of the fibula is a depression which often has a wrong use ascribed to it. It is generally said to give attachment to the posterior fasciculus of the external lateral ligament of the ankle-joint. Last session the author had the honour, he said, 'to show specimens to the Society demonstrating that the depression served for the reception of the ligament during extension of the foot, the ligament itself being attached to the apex of the malleolus.'

October 28.

Mr. S. Paget showed specimens of tumours in wood.

Mr. King read his paper on 'Diagnosis and Treatment.'

November 4.

Mr. C. E. Paget showed a case of iridodonesis with partial dislocation of the lens, more marked on the left side, downwards and inwards. There were traces also of past choroiditis.

Mr. W. H. Cripps introduced the surgical discussion on fractures. He limited the question to fractures of the lower extremity. He spoke of the treatment, first of compound, then of simple fractures of the femur, showing a model of a splint invented by himself; then of fractures at the ankle-joint, and of the patella.

Mr. Heath, Mr. Bruce Clark, Mr. Bowlby, Dr. Spark, Mr. Oscar Clarke, Mr. Nance, and Mr. Ernest Clarke took part in the discussion which followed.

Mr. Cripps replied.

A vote of thanks was unanimously passed to Mr. Cripps, and the meeting adjourned.

November 11.

Mr. E. Clarke showed a Chinese book of surgery.

Mr. C. E. Paget showed two photographs of a girl whose face somewhat resembled a monkey, with the history of a fright to the mother by a monkey when three months pregnant with the child.

Mr. Gill read his paper on 'Adenoid Disease.'

The author, after having alluded to the several instances in which enlargement of the lymphatic glands occurs, referred such enlargements, for the purposes of accuracy and clearness, to three groups:—

I. Enlargement of one or two glands. These are painless, quite movable, and of firm consistency—the lymphomata.

II. Enlargement of the several glands of a particular group. Rapid growth, tendency of glands to become immovably fixed with each other and with deeper structures; painful and becoming softer in places, and almost fluctuating—the lympho-sarcomata.

III. Enlargement of glands in more than one region of the body, followed subsequently by a characteristic change in the components of the blood, the colourless corpuscles becoming greatly increased in number—lymphadenoma or adenoid disease.

Having summed all the arguments in favour of and against this view, viz., that the increase of the lymphadenomatous gland is mainly (if not entirely) due to changes of a chronic inflammatory nature, he proceeded to adduce a new cause for the disease.

He detailed the nature of the circulation of the lymph in the lymphatic spaces and vessels, and then proceeded to show the relation which the state of the blood vascular system has upon this circulation.

The lymph circulation derives a *vis a tergo* from the fluids effused into the cellular interspaces from the arterial capillaries; when this *vis a tergo* is diminished, as in paralysis of the arteries, there is an excess of lymph in the cellular interspaces = lymph spaces, and a diminished force to propel it forward towards the larger lymphatic capillaries. Without there being an actual stagnation of lymph in the lymph spaces, it is quite possible to suppose that the flow of lymph may be so much interfered with that the tension of the lymph in the radicles of the lymphatic system becomes increased, and hence adds a new element in the lymph circulation.

The origin of the disease would, on true principles, be shown to be local at first; it gradually assumes a constitutional or general aspect by implication in succession of several groups of glands; afterwards, from the changes in the blood induced by these glands, the blood becomes abnormal, and the condition of leucocythæmia is added to that of chronic glandular enlargement.

Finally, deposits of adenoid tissue are found in different organs of the body; an attempt, in the author's opinion, on the part of nature to supply a defect in the general system. This, however, can never assume such large proportions as are found in the lymphatic glandular system, but may be sufficient for a while to cause a certain number of colourless corpuscles to undergo such changes as will eventually lead to their becoming coloured ones. In this way the wants of the economy may be carried on for a short time, but in the end the patient dies from one of the results of anæmia which has been induced by the disease.

The treatment of these cases of adenoid disease is extremely unsatisfactory, nothing as yet seeming to have the slightest effect upon the progress of the disease.

If there is any truth in the above observations, the administration of the Calabar bean, which is said to constrict the small blood-vessels, should be tried, with the view of stimulating the blood-vessels, and so increasing the *vis a tergo* in the lymphatic capillaries.

The author has not had an opportunity of trying the effects of this drug upon lymphadenoma. He believes that it should be given in early enlargements of glands.

November 18.

Mr. Bowlby read his paper on 'Chronic Disease of Joints in Children.'

He objected to the term 'strumous' as applied indiscriminately to all classes of chronic diseases of joints, because it was misleading, and gave the impression that the constitutional tendencies of the patient had a closer connection with the malady than the local conditions of the joint. He stated as his opinion that any joint, however healthy, might become the subject of chronic disease as the result of an injury which was not treated by rest, and that even in strumous children no joint became diseased idiopathically, but always as the result of some injury, however slight. The good results of purely local treatment, such as rest, also argued strongly against the constitutional origin of the disease. He pointed out that the fatal results which so often supervened were chiefly due to either amyloid disease or acute tuberculosis, and argued that by cutting short the disease in its earlier stages the best chance was given to the patient.

The only rational mode of treatment in early stages was by rest, but this ought to be carried out much more thoroughly than was usually the case: *e.g.*, in morbus coxæ the child should not only be treated by a long splint and weight, but should never be allowed to sit up, for such an action necessitated motion in the diseased articulation, and might perhaps break down the freshly formed adhesions which had taken weeks to form. Rest might usefully be combined with other local treatment, extension, &c., and care taken of the general health. It was a mistake to suppose that the constitution as a rule suffered by the necessary confinement, for, on the contrary, it generally improved. The difficulty of applying these principles to diseases of the lower extremities to a great extent explained the greater frequency of diseases of the knee, hip, and ankle.

Under the present system of out-patient practice it was impossible to treat such cases satisfactorily, and so long as such was the case a better chance of life was given to those patients by either excision or amputation at an earlier period than was usual. Mr. Bowlby then explained what he considered the indications for excision, and pointed out that caries and even necrosis might exist without any grating in the articulation. Statistics showed that in children death was rarely the result of the operation, and a limb after a successful excision was far more useful than any artificial apparatus. He had seen such good results from the excision of different joints that he was inclined to regard the operation with much more favour than was usually accorded it. The operation differed as applied to the different articulations, but in the lower extremity great care should be taken that the limb was not used too soon.

Excision was a more severe operation than amputation as regards the length of convalescence, and a patient should not be subjected to it unless the constitution was fairly sound and able to sustain prolonged suppuration and confinement; but even after excision had failed amputation might be done, though under less favourable circumstances than if it had been primarily selected.

November 25.

Mr. Heath showed a case of congenital hydrocephalus and malformation of all limbs.

Mr. Lockwood showed an intestine taken from a case in which colotomy had been performed. The cæcum lay beneath the liver; there was no ascending colon, a long diverticulum from the colon and a large mass of cancer surrounding the rectum.

Mr. Coles read his paper on 'Squint.'

December 2.

The medical discussion on coma by the House-Physicians was opened by Mr. H. H. Tooth, who spoke on the definition and etiology of coma. He was followed by Mr. S. Nall on the diagnosis, and by Mr. Cronk on the treatment of cases of coma.

The discussion was continued by Mr. Gill, Mr. King, Mr. Herringham, Dr. Spark, and Mr. E. Clark.

Mr. Tooth replied.

December 9.

Mr. Day read his paper on 'Homœopathy.'

January 20.

Mr. Jessop read his paper on 'Hystero-Epilepsy,' which will be found on p. 177 of the Hospital Reports for the year 1880.

January 27.

Dr. Harris showed specimens of triple staining, and described the method employed.

Mr. E. Clarke read his paper on 'Lead-Poisoning.'

The chief object of the paper was to draw attention to the numerous cases of lead-poisoning by drinking *four-ale.*

In public-houses the beer that remains in the leaden pipes all night is always drawn off into a leaden sink, and passes thence into a vat or leaden tank, into which receptacle also passes all the waste beer of the day, to be pumped up again for the cheap consumer, and sold as four-ale or four-half.

This form of poisoning, of course, only occurs in towns where the pump system is used. Four-ale most contaminated with lead is procured early in the morning.

From among the numerous cases I have met with, I pick out the following interesting ones.

C. W. and R. J., middle-aged working-men, attending the Medical Out-Patient Room. C. W. was suffering from lead-poisoning. R. J. was suffering from bronchitis, and had no sign of symptom of lead-poisoning.

I discovered that both these men attended the same public-house ; but C. W. always had a drink of four-ale on his way to work, about 6 A.M.; whereas R. J. never had a drink till mid-day, by which time all the poisoned ale was probably used up.

Method of testing ale for lead.—Decolorise the sample with charcoal (a slight yellow tinge is always left), filter and acidulate, then pour the solution into two porcelain dishes in equal amount, so that, if any colour remains, there should be the same intensity of colour in each dish. A much better result can be obtained by evaporating the original sample down to a quarter of its original bulk. Now pass sulphuretted hydrogen through one of the solutions for two hours, if possible (the longer the better), after which compare the two solutions. If lead is present, the solution through which the sulphuretted hydrogen was passed will be of a deeper and browner colour.

I obtained better results from this method than from any other.

February 3.

Medical discussion on the Pulse. Dr. Harris dwelt first on the importance of the pulse in diagnosis and prognosis, aiding us as it does by its frequency, hardness, &c., with other symptoms, to form a diagnosis. He showed, secondly, that it was diagnostic of no one disease though helping in so many. He pointed out, lastly, how little good instruments were in practice for recording differences in the pulse. He did not believe that any sphygmographic tracing was diagnostic of a disease, and considered them only useful where frequently employed.

Mr. Heath thought the pulse much more diagnostic than Dr. Harris, instancing the 'water-hammer' pulse. He put the normal range of the pulse at from 60 to 90, and wished for more information about irregularity.

Mr. Jessop related a case where the pulse was 36 in health, and another of palpitation where it was irregular in volume and frequency.

Mr. King said that the variations of the pulse might be considered together with the different structural lesions of the heart, the diagnosis of which it greatly helped; and that the pulse varies with the nervous state of the body, an important point in the examination of children. He disputed the statement of Dr. Harris that increased frequency alone was not a state of disease, quoting Latham's cases to the contrary.

Mr. Lockwood considered it important to take the pulse on both sides, and to compare the increased frequency of the pulse with a raised temperature in acute diseases, and gave his experience of the great value of the pulse in administering anæsthetics.

Mr. Barrett thought the pulse useful in prescribing, and prophesied the future utility of the sphygmograph.

Mr. E. Clarke believed that the sphygmograph was not enough used, and thought that the pulse should be taken at the same time every day.

Mr. Spark had counted the pulse at 160, and did not think it possible to do so at a much higher rate. He considered a hard pulse to indicate bleeding, and lamented that in England the pulse was not so much studied as on the Continent.

Dr. Coates thought the pulse exceedingly useful in prognosis and stated that in convalescence from acute disease it was generally dicrotic; he disbelieved in its importance in the diagnosis of heart disease and in the advantage of the sphygmograph.

Mr. Davis thought that there was no relation beween pulse and temperature, and related some aconite experiments.

An unanimous vote of thanks to Dr. Harris was passed, and the meeting adjourned.

February 10.

Mr. Heath showed a case of abortion of a fœtus two months old, after operation for removal of a fibroid tumour in which the uterus was lengthened to seven inches, presumably by pressure of the fibroid.

Mr. Hockin showed specimens of pulse tracings to demonstrate the errors which may be made in taking them.

Mr. Hockin read his paper on 'The Radical Cure of Hernia.'

In the first part of this paper the two theories regarding the causes of hernia were dealt with. The author adopted the pathological theory, maintaining that the intestines are not prone to displacements in the normal and healthy condition of the mesenteries and ligaments, and while allowing that protrusion is the result of the mechanical action of the muscular parietes, he held that the intestines do not come within the sphere of that expulsive action until they have descended somewhat in the cavity of the abdomen by the relaxation or hypertrophy of their attaching membranes.

In support of this theory he drew attention to herniæ which remained stationary for years till some debilitating disease supervened, when they increased in size very rapidly; to the closed tunica vaginalis being peculiar to man; to a case of patent tunica vaginalis without hernia. Cloquet's theory with regard to inguinal hernia in right-handed people was disproved by facts. The strength and elasticity of the mesentery were illustrated, and several cases were quoted, among them Dupuytren's, where the intestine was not attached to the scar, but was only attached to it by a fibro-cellular cord in bodies examined some years after recovery from an artificial anus caused by a strangulated hernia.

If the pathological theory were right, the operation for radical cure, namely, to obtain adhesions between the walls of the hernial sac or to obliterate the canal, did not seem likely to be successful, since ventral herniæ almost always make their way through scar tissue, and herniæ have returned through the scar formed by the sloughing of a strangulated hernia.

In the latter part of the paper the various remedies tried were briefly mentioned, including the actual cautery, caustics, ligature and suture of the sac, Wood's and Dunnett Spanton's operations.

It was pointed out that out of 60 cases published by Wood, only 4 were distinctly recorded as not wearing trusses at the time the book was brought out, while the after-history extends for one year or more in only 8 cases. One of these 8 cases was operated on in 1861, seen cured in 1863, but applied to the Truss Society in 1865 with a rupture on the same side as the operation. The theory of the operation could not be supported nor its principles upheld, and since its success was so small, the practice of it should be abandoned.

February 17.

Mr. S. Paget showed a skull from a subject at Edinburgh, remarkable for the size of the pituitary body, associated with extraordinarily enlarged intestines.

Mr. Square showed a stone taken from a man aged 24, with a history of the affection since 2½ years of age, the stone being externally coated with phosphates.

Mr. Jessop showed Dr. Hensley's apparatus for evacuating and washing out a cavity containing fluid.

Mr. Coates read his paper on 'Empyema.'

February 24.

Mr. Lockwood showed a foreign body in the tunica vaginalis, probably fibrin.

Mr. King showed microscopic specimens of a cerebral tumour.

Mr. Collins read his paper on 'Compulsory Vaccination,' which will be found in full abstract in Vol. ix. of the 'Student's Journal,' No. 214.

The discussion on this paper was concluded at an adjourned meeting on March 1.

Thursday, March 3.

Mr. Bowlby brought forward the House-Surgeons' subject for discussion—stricture of the urethra. After speaking of the seat, character, and diagnosis of stricture, he mentioned the several treatments by gradual and forcible dilatation, by external and internal urethrotomy.

Mr. Lockwood spoke of *meatotomy* and of internal urethrotomy; he dwelt upon the frequency of deep, probably reflex, stricture disappearing after division of another nearer the meatus, also upon the presence of 'strings' in the urine as a means of diagnosis.

Mr. Coates mentioned as possible causes exposure and drunkenness.

The discussion was continued by Mr. Gill, Mr. Heath, Mr. King, Mr. E. Clark, Mr. S. Paget, Mr. Berry, Mr. Herringham, and Mr. Trotter.

The House-Surgeons replied.

March 10.

Mr. Heath read his paper on 'Hæmophilia.'

In this paper the author, after briefly alluding to the history and diagnosis of the disease, and discussing the current doctrines as to its ætiology, proceeded to relate the notes of three cases that had recently been treated in St. Bartholomew's Hospital.

In the first of these, that of a man aged 32, the patient had fourteen attacks of recurrent and secondary hæmorrhage following a wound in the palm of the hand.

Both the radial and ulnar arteries were tied during the course of treatment, but the hæmorrhage was always best controlled by acupressure. The patient recovered at the end of six weeks, with the loss of two fingers, which it was found necessary to amputate.

In the second case, a man aged 25, a member of a well-marked bleeder family, received a small wound in the back, near the spine of the scapula, from a broken piece of glass. The bleeding in this case lasted off and on for ten days, and was at each recurrence effectually controlled by filling the wound with solid perchloride of iron and the application of a pad firmly bandaged on over it.

The third patient, a young man aged 21 (also a member of a well-marked bleeder family), who had previously suffered from almost fatal attacks of hæmorrhage and from swelling of the joints, was admitted with a large, spontaneously occurring, blood-tumour in the upper part of the calf of the left leg. On account of great pain and tension and threatened bursting of the cyst, it was punctured by Mr. Holden, and part of its contents evacuated. The bleeding, which continued slightly for thirty-six hours, was stopped at first by the application of an ice-bag, and on its subsequent recurrence, on two occasions, by the application of direct pressure to the wound. The puncture took a long time to heal; but in about eight weeks the patient was well enough to be discharged, nearly the whole of the blood in the tumour having been absorbed. Two or three weeks later, however, he was readmitted; the remainder of the blood in the cyst having undergone degeneration, and an abscess having formed at its site, this was cautiously opened, and several ounces of pus mixed with much blood evacuated. The discharge of sanious pus continued for some days, but the abscess cavity eventually closed completely, and the patient was discharged well.

Special stress was laid on the mode of treatment in this case of blood-tumour by puncture, and of the abscess cavity by incision, both being contrary to the ordinary treatment of such cases as laid down in books, but the result justified the means adopted, and proved the possibility, under exceptional circumstances, of treating 'bleeders' on ordinary surgical principles.

The histories of two female patients were also related, in whom the symptoms were 'hæmorrhage,' and the occurrence of subcutaneous hæmorrhages at the menstrual periods. These cases were alluded to as supporting Dr. Legg's statement that this was the form of disease most common in women of bleeder families, traumatic hæmorrhages being rarely, if ever, seen.

The various methods of treatment, both constitutional and local, were then discussed. For the former, the long-continued administration of iron was specially advocated, as its beneficial effects were so apparent in the cases reported.

In the local treatment, the application of an ice-bag to check interstitial bleeding was strongly recommended, whilst the use of acupressure and the application of solid perchloride of iron combined with pressure was recommended for arresting the hæmorrhage from a raw surface.

Finally, the pathology and morbid anatomy of the disease were discussed, the author stating his belief that in most if not all cases of true hæmophilia, the blood itself, and also the tissues, more especially the walls of the capillaries and small arteries, were in a morbid condition.

His reasons for thinking the blood in an abnormal condition, were—*First,* that in many of the reported cases, and in those described by himself more particularly, the blood, even that first drawn off, looked pale and watery, and formed a very imperfect coagulum; and, *secondly,* on microscopical examination, the number of corpuscles in a given field were greatly diminished in number, this diminution chiefly affecting the red corpuscles. That the capillaries and tissues were the seat of morbid change, he stated, had been shown by Dr. Kidd in a recent paper, in which the walls of the capillaries and small arteries were stated to have undergone 'hydropic changes,' their calibre being diminished, whilst the mucous membrane of the mouth near the spot whence fatal bleeding had occurred, was also the seat of necrotic degeneration.

March 17.

Annual meeting for the election of officers for ensuing year. The following were elected:—Presidents, Mr. King, Mr. Bowlby; Vice-Presidents, Mr. Collins, Mr. Clarke; Treasurer, Mr. Savory; Hon. Secretaries, Mr. H. L. Jones, Mr. S. Paget; Committee-men, Mr. Steedman, Mr. Hind.

THE

ABERNETHIAN SOCIETY

ST. BARTHOLOMEW'S HOSPITAL.

REPORT OF PROCEEDINGS.

SESSION 1881-82.

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1882.

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LIST OF CASES AND SPECIMENS SHOWN AT THE SOCIETY'S MEETINGS.

Oct. 20.	Mr. E. Clarke	Snellen's Test-Glasses.
„	Mr. S. Paget	Larvæ of a Dipterous Insect, passed by a Child through the Urethra.
Oct. 27.	Mr. Chambers	Dissection of a Knee-Joint containing a Loose Cartilage.
„	Dr. King	A Case of Acute Urticaria.
	„	A Case of Paralysis Agitans.
Nov. 10.	Mr. S. Paget	Two Cases of Branchial Fistula, and a Case of Cleft Mouth (Macrostoma).
„	Mr. W. J. Collins	A Case of Syphilitic Rash.
Nov. 17.	Mr. E. Clarke	A Case of so-called Vicarious Menstruation.
Dec. 1.	Dr. Stowers	A Case of Tubercular Syphilide, and a Case of Lichen Planus.
Dec. 15.	Mr. Stretton	A Dissection of Extra-uterine Fœtation.
Jan. 12.	Mr. Hockin	A Specimen of Punctured Wound of the Heart.
Jan. 26.	Mr. Bowlby	Intestine Perforated by a Fish-bone.
Feb. 9.	Dr. Stowers	A Case of Molluscum Fibrosum.
Feb. 16.	Dr. King	A Case of Keloid, and a Case of Scleroderma.
Feb. 23.	Mr. E. Clarke	Microscopic Specimens in Embryology.
March 2.	Mr. Fletcher	Model of a Necrosed Piece of Bone, passed by the Urethra, in a Case of Hip-Disease.
March 9.	Dr. King	A Case of Lateral Sclerosis, with Vertical Nystagmus.
„	Mr. Griffith	Two Specimens of Abnormal Branches of the Aortic Arch.
March 16.	Mr. Fletcher	A Case of wide-spread Hairy Growth on the Back and Thighs.

(On October 20 and March 2, Specimens of Drugs and Pharmaceutical Preparations were shown after the Meetings.)

THE ABERNETHIAN SOCIETY having determined in Special Meeting that it was advisable to publish a Report of its Proceedings, appointed a Committee to carry the project into effect. The Committee therefore drew up the following Rules, which were accepted by the Society at the General Meeting: —

1. With the approval of the Editors (of the Hospital Reports), that the Proceedings of the Society should be published in the Hospital Reports as heretofore, but in more detailed form, and that afterwards reprints should be thrown off for distribution among its Members.

2. That the papers for publication be selected by a Committee consisting of the two Presidents, two Vice-Presidents, two Hon. Secretaries, and the Hon. Treasurer.

3. That the reprints shall be stitched in the form of a pamphlet, and shall contain a complete List of the Members of the Society for the last five years, and a Table of Contents shall also be provided, with a printed cover.

4. That copies be distributed, free of charge, to Members who are not of more than five years' standing, and that those of more than five years' standing may obtain copies on payment of one shilling each.

5. That these Rules be also printed in each copy of the Proceedings for the information of Members.

SESSION 1881-82.

OFFICERS.

Presidents.—Mr. D. A. KING and Mr. A. A. BOWLBY.
ce-Presidents.—Mr. W. J. COLLINS and Mr. E. CLARKE.
norary Secretaries.—Mr. D. L. JONES and Mr. S. PAGET.
ional Committee-men.—Mr. J. F. STEEDMAN and Mr. A. E. HIND.

---

st of Gentlemen who have become Members of the Society during the past Five Years.

1877–78.

age, J.
aw, J. W.
y, A. A.
tt, J. B.
, A. J.
y, W. C.
, S. T.
, W. T. M.

D. D.
rds, J.
, T.
lin, A.
er, W.
A.
, W. E.
gham, W. P.
rd, H.

all, A. M.
, S.
.
, C. E.
Payne, W. A.
Raymond, H.
Raymond, L.
Read, M.
Ross.
Rumboll, C. F.
Shaw.
Stead, G.
Thomas, W. D.
Tooth, H. H.
Walker, C. R.
Walker, E. G. A.
Wheeler, T. K.
Wyatt, W. T.

1878–79.

Anderson, A. J.
Barling, G. H.
Barnes, G. F.
Bateman, H. E.
Biss, C. Y.
Bowe, F.
Browne, O. A.
Burn, S. S.
Clarke, E.
Collins, W. J.
Garstang, T. W. H.
Harris, U. A. C.
Holland, B. A.
Hooper, H. W.
Jenkins, E. J.
Jessop, W. H. H.
Jones, R.
King, D. A.
Kinneir, W. E.
Macalister, D.
Nance, A. S.
Nance, H. C.
Nichols, H. P.
Phipps, E. V.
Power, D'A.
Poynder, J. L.
Preston, H. T.
Rice, E.
Rushworth, F.
Rushworth, N.
Saunders, C.

Shelley, C. E.
Spackman, H. R.
Square, W. H.
Stretton.
Taylor, T. P.
Trower, A.
Wilson, J.

1879–80.

Bell, W. T.
Bennett, G. H.
Benson, C. R.
Berry, J.
Bewes, E.
Brinton, R. D.
Brooks, J.
Broadbent, F.
Bullar, F. W.
Buckland, T.
Barkley, C. H.
Burke, H. W.
Clark, O. W.
Chittenden. T. H.
Chalmers, A. H.
Colville, E. G.
Crang, J. J. G.
Cooper, W.
Copner, A. L.
Davy, T. G.
Davies, S.
Day, J. L. E.
Francis, H. A.
Fletcher, G. A. C.
Gilbertson, H.
Harper, J.
Howe, J. E.
Hill, W.
Hill, A.
Harding, C. O'B.
Henderson, G. C.
Hewer, J. L.
Jalland, R. W.
Javal, R. Cremiere
Kendall, T. M.
Ley, H.
Lyndon, A.
Mason, J.
Maturin, B. A.
Misnet, C. J.
Moberly, S. C. H.
Mead, R. W.
Michell, M.
Nias, P. B.
Paget, S.
Parkinson, H.
Pope, F. M.
Partridge, W. T.
Ray, W.
Rice, B.
Risk, E. J.
Read, H. G.
Sandeman, D. G. S.
Shore, T. W.
Slater, D. J.
Stevenson, H. W.
Strynell, W. T.
Stephen, E. N.
Spark, J.
Square, J. E.
Short, F. J.
Tait, H. B.
Terry H. G.
Towlson, H. J.
Travers, G. F
Tripp, C. H.
Trotter, W. O.
Treherne, F. H.
Toller, C. W. E.
Vos, G. H.
Waller, T. H.
Waring, J. A.
Willett, E. W.
Whitwell, A. F.
Weakley, A. J.
Walker, C. R.
Wedmore, E.
Yeatman, J. W.

1880–81.

Alcock, S. K.
Andrew, E. O.
Avrill, C.
Back, H. H.
Bailey, C. F.
Bailey, W. H.
Barnard, E. G.
Burn, T. W. B.
Barrett, R. H.
Barry-Wyeth, R.
Barsham, W. O.
Batten, R. D.
Beattie.
Bird, A.
Bontor, S. A.
Bowden, R. T.
Campbell, E. K.
Campbell, H.
Calvert, J.
Carter, T. E.
Chamberlain, W. H.
Chambers, H. W.
Chapman, H. C.
Church, B. E.
Churcher, H. R.
Clayton, G.
Collins, O. A.
Collins, W. C. G.
Collyns, R. J.
Cresswell, F
Dagg, J A.
Dalley, W. C.
Davies, A. T.
Downing, C.
Evill, F. C.
Featherstonhaugh, R.
Feeny.
Fenhoulet, J. P.

ndez, E. J.
er, W. W. E.
es, A. C.
rton, A. G. R.
H.
el, L. M.
el, W. M.
er, H. W.
er, W. T.
d, A. E.
n, T. L.
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H. W.
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eister, G. B.
e, J.
, E. A. W.
, B.
y, J. B.
s, C. B.
le, T.
son, A. M.
o, A. H.
p, E.
p, J. W.
s, C.
s, H. L.
n, O. R. A.
n, F. H.
house, G.
ie, C. R.
rence, L. A.
h, H. P.
lon, C.
er, A. E.

Macfarlane, A. A.
Maher, C.
Marsh, N. P.
Mason, F. J.
Matthias, T. B.
Maude, A.
Mends, B. S.
Mitchell, H.
Molden, F. J.
Moore, W. F.
Nall, J.
Napier, F. H.
Nuttall, C. D.
Opie, E. A.
Orr, A. A.
Overend, W.
Page, A. M.
Palmer, S. J.
Parker, H.
Parsons, H. C.
Paterson, W. B.
Pettifer, E. C.
Pollard, R.
Preston, F. H.
Price, A. T.
Pruen, S.
Pullen, P. G.
Rayner, H.
Richards, G. F.
Richmond, W.
Robinson, L.
Ross, W. D.
Santi, R. P.
Scott, J.
Shadbolt, H. P.
Shadwell, W. H.
Sharman, J. G.
Shaw, C. C.
Simmons.
Sloman, F.
Smith, B. E.
Smith, E. C.
Southcombe, A. G.
Spicer, T. H.

Spilsbury, F. T.
Starr, W. H.
Steedman, J. F.
Stevens, F. J.
Strickland, C.
Thorpe, G.
Valpy, C. E.
Vogan, J. N.
Wallis, F. C.
Walsham, H.
Walton, G. A.
Wells, G. L.
White, J. H.
Wickham, G. W.
Williams, E. R.
Wilson, J. G.
Womack, F.
Woods, E.
Wordsworth, W. J.

1881–82.

Agnew, E. D.
Aldous, G. F.
Alsop.
Barber, F. S.
Bartram, P. O.
Bennett, A. J.
Bensley, C. N.
Bindloss, E.
Bond, B. M.
Bostock, R. A.
Campion, G. G.
Cannington, J. C.
Carlyon, E. T.
Chapple.
Cheale, M.
Christopherson, C.
Clarkson, T. H. F.
Cockerill, J. W.
Combes, R. H.
Coulan, C.
Cross, R. G.
Crouch, C. P.

Cummings, H. L.
Davidson, W. H.
Davv, T. G.
Delisle, A.
De Morini, W. R.
Dowson, W.
Drage, L.
Dunn, P. H.
Edgington, D.
Fox, F. G. T.
Fountain, E. L.
Fox, F. G. T.
Gow, W. G.
Green, G. S.
Grosvenor, W. W.
Harper, A.
Hassard, E. M.
Haviland, A. H.
Humby, D. M.
Humphry, E.
Jackson, H. F.
Jacques, T. W.
James, W.
John, D.
Johnson, P.
Jones, J.
Jowers, R. F.
Lacey, W. W.
Leaver, C. B.
Lewis, E. J.
Low, C. W.
McDougal, R. E.
Morgan, A. L.
Morrell, A. C. F.
Morris, C. A.
Murray, G. E.
Nielsen, F. W.
Oliver, T.
Otway, H. C.
Pagden, T.
Pain F.
Paley, F. J.
Peach, C. S.
Penhall, W.
Pritchard, J.
Ramsay.
Reece, R. J.
Reid, G. M.
Robbs, C. E.
Rolleston, H. D.
Shadwell, B.
Simmons, E. H.
Smith, E. F.
Smith, M.
Smith, R. G.
Spencer, W. G.
Stacey, W. H.
Stubbs, P. B. T.
Styan, T. G.
Taylor, H. P.
Taylor, P. C. P.
Trist, B.
Tyson, E.
Wallington.
Walsh, A. W.
Walsh, C. L.
Wellington, R. H.
Whitehead, H. E.
Williams, H.
Wright, Z.
Wyndham, A. E.
Young, C. W. F.

PROCEEDINGS

OF

THE ABERNETHIAN SOCIETY

DURING THE WINTER SESSION 1881–82.

October 12.

Special meeting, for the election of members, and other business.

October 13.

First general meeting. Election of members. Mr. Marsh gave the Introductory Address. He traced the early history of the Society, and pointed out that many valuable researches and discoveries had been first made public at its meetings. He spoke of the importance of the Society as a help in education, and of its social influence; and exhorted members to keep in mind that there are as many great discoveries to be made as have been made in the past; and ended by congratulating the Society on its strength now and on its good promise of prosperity in the future.[1]

October 20.

Election of members.

Mr. Ernest Clarke showed Snellen's Test-glasses.

Mr. S. Paget showed larvæ of a dipterous insect, passed by the urethra by a female child, sixteen months old.

Mr. Herringham read a Paper, "On a Fortnight's General Practice."

Specimens of drugs and pharmaceutical preparations were shown, after the meeting.

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[1] Mr. Marsh's Address has been printed for the use of the Society.

October 27.

Election of members.

Mr. H. W. Chambers showed a dissection of a knee-joint containing a loose cartilage.

Dr. King, for Dr. Stowers, showed a case of urticaria.

Dr. King also showed a case of paralysis agitans, of four years duration.

Mr. Bowlby read a Paper "On the Treatment of Wounds:" an abstract is here given.

Treatment of Wounds.

Firstly, let me suggest that you should take no narrow view of this subject, and, at the commencement, it will be well to look for a few minutes at the natural processes of healing in a wound.

This healing is described as occurring in the following ways:—

1. Primary union.
2. Primary adhesion.
3. Granulation.
4. Secondary adhesion.

The first, though spoken of as common enough, is really, in the full acceptance of the term, rare. For by it is indicated the actual growing together (without the formation of any plastic material, such as fibrine) of the divided tissues.

The second is more frequent, and the sequence of events, in primary adhesion, is as follows:—The bleeding vessels and capillaries are closed by coagula, and the surfaces of the wound, becoming glazed with fibrine, adhere to each other. The surrounding tissues soften, being infiltrated with leucocytes and serum, and a fibrillar tissue succeeds, rich in capillaries; this gradually becomes fibrous, the softened tissues contract, the new vessels disappear; union by fibrous tissue results—*i.e.*, union by a cicatrix. Now the process by which this scar is formed is "Inflammation;" for, look at it in what way you will, there can be no doubt that the migration of leucocytes, the effusion of serum, and the softening of the tissues are all essentially inflammatory—a modified inflammation, if you will—an inflammation kept within bounds; but still an inflammation.

From union by "Primary adhesion" the step is very short to "Union by granulation." You have only to imagine that the cell-infiltration and effusion of serum, of which we have spoken, increases, and that the tissues, instead of being only softened, are liquified, the result is "suppuration," and the new blood-vessels, which we have formerly seen lying in "fibrillar tissue," now lie in a mass of cells, or "granulation tissue." Union by "Secondary adhesion" is simply the growing together of the contiguous surfaces of granulations.

Such then, very briefly, are the various processes by which a wound may heal.

What, then, is the object of treatment? Expressed in a few words it is, "To place and maintain a wound in the condition most favourable for rapid union." For, whatever may be said on the various side issues, there can be no doubt that the main aim and object of the surgeon is to close the wound as rapidly as possible.

Now, as wounds vary in degree and kind, the details of the treatment vary with them, and into all such details it is impossible for me to enter here. We will, therefore, take as an example an incised wound, such as is made in an amputation, in which as little damage as possible is inflicted on the tissues.

The bleeding joints are secured by carbolized catgut ligatures, the capillary oozing soon ceases on free exposure to the air, the surfaces thus become glazed with fibrine, and the flaps are now placed in the condition most favourable for primary adhesion, for it is by this process that we aim at uniting most of our wounds.

Now, to succeed in this, the first necessity is that the parts shall be duly approximated, and that they shall possess a certain homogeneity of structure. But there are corners and crevices close to the bone which will certainly not, as a rule, heal by primary adhesion, and in these parts union by granulation must result. If such is the case, surely provision must be made for the escape of the resulting secretion.

What are the sources from which the discharge springs? Firstly, from blood which is effused from the recently cut vessels, and the serum which is squeezed out of the clots. Secondly, from the inflammatory effusion.

Now, in the very large majority of wounds, it is extremely unlikely that discharge from one or other of these sources will not be present even though to a very small amount. Some means of exit must thus be provided, and therefore in some part of the wound, we voluntarily prefer that primary adhesion shall not occur. In a stump, we naturally select that part which is least prone to unite, and, after approximating the flaps, pass either a drainage tube or a piece of gutta-percha tissue across the wound, and bring out the ends at the angles of the flaps; the drain may be removed in forty-eight hours. The cut surfaces may then be stitched together, and carefully supported by the even pressure of a bandage, and the limb and the patient placed in the most easy position; for rest is essential. Under the head of "Rest," I would include freedom from all tension; for, if the parts be tightly stretched, a favourable result will not be obtained, as is seen in ill-advised plastic operations, such as for cleft palate or hare-lip.

In the subsequent treatment, the wound should be interfered with as little as possible. No good end is attained by washing it out, if it remain perfectly sweet, and there is no retained discharge; its sides should never be forced apart by forcible syringing, which only serves to break down the young and delicate adhesions, and the less often the wound is touched the better for the patient; I think the tendency is towards too frequent dressing.

Now, the *amount* of injury inflicted on any tissue, and the irritation to which the same is afterwards subjected, are in inverse ratio to the rapidity of healing; therefore, if any source of irritation exists, or if the woünd is lacerated and bruised, the inflammation necessary for union by primary adhesion will undoubtedly go on to suppuration; and it is with a view to remove all irritation, and avert from the wound any noxious influence which will increase inflammatory action, that all our precautions are taken. The use of dressings are to cover the wound, to provide pressure, receive the discharges and keep out all matter which tends to produce decomposition.

I think one of the nicest means of obtaining these results is to cover the cut surfaces with lint soaked in olive or almond oil, which does not cause any irritation, then pad carefully with salicine wool, and bandage firmly. Should there be an open granulating sore, the application must vary with the characters of the granulation-tissue.

So long as the above principles are kept in view, I think it matters little what particular method we may use, and I am in no way inclined to allow the claims made for Listerism. What, then, is claimed for this particular method? Briefly, I think it is this:—(1) That wounds so treated heal more rapidly. (2) That complete immunity is obtained from blood-poisoning. (3) That the mortality after operations is decreased. But these statistics which I show you do not support these claims, but tend to prove that operation-wounds are just as well treated by other and various methods as by the spray and gauze; and I think that whenever we have to do with large surfaces which can be readily approximated, and where free drainage is easy, we in no way benefit our patient by preferring Listerism to other dressings. I do not, however, object to this method, except in so far as it arrogates to itself a superiority over all other methods; I allow its equality in results, but would only remind you that it possesses serious drawbacks in application. The claim that wounds treated by this method heal more rapidly does not tally with my own experience; cases of erysipelas and pyæmia have occurred in the practice of many surgeons, in that of Lister himself, and the low death-rate is rivalled by that of other methods. Therefore, while I allow the claims Listerism has to be considered a good and useful method for treating wounds, I do not consider it in any way indispensable, and would urge you not to be content with any method so long as any preventable mortality whatever follows in the course of the surgeon's knife.

I. *Secondary Major Amputations.*

	Mr. Lister.			Mr. Spence.			Mr. Baker.			Mr. McVail (Kilmarnock).		
	Number of Operations.	Recovered.	Died.	Number of Operations.	Recovered.	Died.	Number of Operations.	Recovered.	Died.	Number of Operations.	Recovered.	Died.
Hip .	0	0	0	1	1	0	3	2	1	0	0	0
Thigh .	26	25	1	25	23	2	13	12	1	33	32	1
Knee .	0	0	0	0	0	0	1	1	0	0	0	0
Leg .	5	5	0	5	5	0	12	11	1	24	24	0
Ankle .	16	15	1	22	22	0	6	6	0	16	15	1
Foot .	0	0	0	0	0	0	0	0	0	7	7	0
Shoulder	1	0	1	3	3	0	0	0	0	0	0	0
Arm .	6	6	0	3	2	1	3	3	0	7	7	0
Forearm	8	8	0	4	4	0	12	12	0	3	3	0
Total .	62	59	3	63	60	3	50	47	3	90	88	2

	Operations.		Died.		Percentage.
Esmarch (1st period)[1] . .	524	...	25	...	4·4
Esmarch (2nd period)[2] . .	398	...	6	...	1.2
Lister at Edinburgh . .	725	...	39	...	5·1
St. Bartholomew's, 1876–78	1,235	...	72	...	5·82
Kilmarnock, 12 years . .	278	...	12	...	4·1

November 3.

Surgical discussion.

Election of members.

Mr. Macready introduced the Surgical Discussion on Arterial Hæmorrhage. Two questions were considered—What process does Nature use to arrest hæmorrhage? and secondly, What are the causes of the failure of the process?

November 10.

Election of members.

Mr. S. Paget showed two cases of branchial fistula, and a case of cleft mouth (macrostoma).

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[1] During which he used Listerism.

[2] During which he used lint soaked in absolute alcohol and iodoform bandages.

Mr. Womack showed a case of congenital malformation of fingers and toes.

Mr. Collins, for Dr. Stowers, showed a case of dermato-syphilis.

Mr. Womack read a Paper "On Renal Secretion." An abstract is here given :—

In the first part of the Paper the speaker contended for the remarkable similarity that apparently obtains between the secretion of the kidney and that of other glands, such as the submaxillary and pancreas.

With regard to the secretion of the submaxillary gland, it has been shown that it is governed by efferent impulses reaching it by the chorda tympani. This nerve contains two sets of fibres, the first vaso-dilator in character, and the second secretory, and distributed directly to the actively secreting cells—that is, the first set of fibres may be said to govern the amount of fluid eliminated in the saliva, the second set of fibres regulating the amount of the constituents, such as ptyaline.

So, too, in renal secretion, we have to deal with two divisions —the first the amount of the fluid medium eliminated, which is dependent on the blood-pressure in the kidney; and second the amount of solid constituents contained dissolved in the secretion.

One difference, however, at the outset exists in the fact that some of the constituents normally found in the urine reach it by a different path from that by which the great bulk of the fluid passes. The kidney has, so to speak, reached a higher stage of physiological development than have the other secreting glands, for in the kidney there is a differentiation of function by which the various constituents of the urine are produced or eliminated.

Similar methods of proof of the division of labour in the kidney are available that were used in proof of the double function of the chorda tympani—viz. :

1. The action of atropine.
2. Stimulation of the renal nerves after atropine.
3. Stimulation of the renal nerves.

With regard to the first method, the action of atropine is variously stated by different authorities, but, from a series of experiments on himself extending over fourteen days, the writer had found that the amount of urinary flow was distinctly diminished; thus the amount of secretion, which was normally 46·17 fluid ounces per diem, was reduced by full doses of tinct. belladonnæ every six hours to 41 fl. oz.

So, too, the secretion of urine, on stimulation of the renal nerves after atropine, is arrested, though here a dissimilarity exists between this and the submaxillary gland in that, although the effects thus produced are the same, stimulation of the chorda tympani is followed by vascular dilation, and not by contraction, as occurs in the kidney after stimulation of the renal nerves.

It is interesting to trace the three stages of differentiation of function which exist in the epithelial cells of the salivary glands, glands of the stomach and the kidney. In the first glands the actively secreting cells are columnar (the others not being concerned in secretion). They thus possess the double function of formation of ptyaline and filtration of the fluid basis of the secretion. In the glands of the stomach two kinds of epithelial cells are found, which Heidenhain has shown have different functions. In the kidney there is the same division of labour, except that there is a difference of position of the two secretory parts of the gland, and it may be said, therefore, to be, physiologically, more highly developed. A point of difference, however, exists in the fact that the kidney is always active, whereas other glands, though always active as regards constructive metabolism, have periods of rest from elimination.

After speaking of the comparative anatomy of the kidney, the researches of Claude Bernard were dealt with, as showing the relationship existing between blood-pressure and amount of urinary secretion, which latter was found to rise and fall in amount concomitantly with rise and fall of blood-pressure.

After imbibition of alcohol there is increased urinary secretion, but both the percentage and total amount of urea, uric acid, &c., is proportionately diminished. The hydruria may be explained by the vascular dilatation following inception of alcohol, the dilatation not being compensated by splanchnic vascular dilatation; but a more probable explanation is that the alcohol exerts a stimulating effect on the inherent dilating nervous mechanism that exists in the kidney itself. This is borne out by experiments of Roy, who asserted last August that stimulation of any cerebro-spinal nerve will produce constriction of the renal arterioles. Dilatation of these vessels may, however, be attained by injection of certain substances into the blood—*e.g.*, urea; and that, too, when all the nerves going to the kidney were cut. He therefore argues that the dilating mechanism for the renal arterioles exists in the kidney itself, and that it is unconnected with the general nervous system. Roy has also shown that the two kidneys are connected independently of the central nervous system, for, after dividing the least splanchnic nerve, stimulation of its peripheral end caused constriction of both kidneys; and again, if both splanchnics were divided, stimulation of either sciatic caused constriction of both kidneys.

Bernard has shown, in unpublished lectures delivered at the

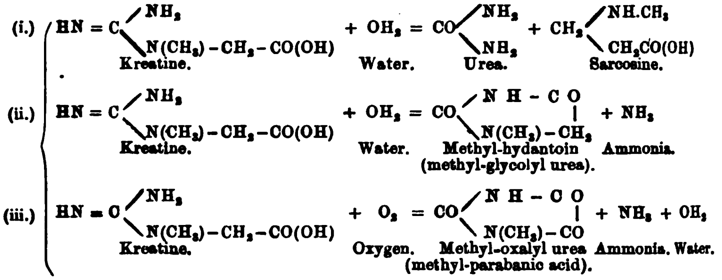
Collège de France, that the kidneys secrete alternately, continuing for from fifteen to thirty minutes for each kidney. As to the rapidity of secretion, in a case of Mr. Erichsen's of extroverted bladder, it was found that ferrocyanide of potassium, given after a fast of eleven hours, appeared in the urine in one minute.

Sugar is found in the urine quite apart from any renal disease, and in diabetes it is found in the blood to a much larger amount than normal. The origin of this increased sugar in the blood has hitherto been attributed to a largely increased conversion of the hepatic glycogen, but Dr. Pavy's recent researches on this subject have done much to solve this interesting problem. He has shown that glycogen exists in the liver to a much larger extent than has hitherto been believed, and that, by the successive treatment of chopped liver-substance with dilute alkali, it may be caused to yield nearly 50 per cent. of its weight of glycogen. This glycogen passes normally into the blood unchanged, so that it is found in the blood to the extent of from ·5 to ·9 parts per 1,000. A relatively small quantity passes from the liver in the form of sugar, and is found as such in the blood, whence it passes into the urine, and is there found normally in very small amount. This small amount of sugar is due to the small amount of oxygenated blood reaching the liver by the hepatic artery, and its ligature is followed by disappearance of all sugar from the blood and urine. If, however, the amount of oxygenated blood reaching the liver be increased, it is found that the amount of sugar passing from the liver into the hepatic veins, and so into the urine, is proportionally increased. This effect follows either by injection of arterial blood into the portal system, or by dilatation of the hepatic artery, or even by increased flow from the mesenteric area. Now, there is known to be in diabetes a largely increased flow of blood through the mesenteric vessels, so that the blood in the veins of the alimentary tract becomes less venous than usual. Consequently an increased quantity of oxygenated blood reaches the liver, and has for its effect the conversion of a large amount of glycogen into sugar. The phenomena of diabetes are therefore exclusively those of vaso-motor paralysis, confined especially to the splanchnic area, and the fact of the diabetic puncture corresponding to a part of the vaso-motor centre is a sufficient explanation of these phenomena.

In view of these latest theories it is interesting to refer to an observation made by Bernard some years ago. In puncturing for artificial diabetes, he found that, if the lesion were made at a point between the origin of the pneumogastric and auditory nerves, saccharine polyuria was induced; whereas, if the puncture was effected above this point, the quantity of urine was increased, but there was absence of sugar; while, if effected below this point, the urine became saccharine, but without any increase in the quantity of fluid.

The question of the antecedents of urea was then considered—one set of physiologists considering that the urea is simply filtered from the blood, in which it exists to an appreciable amount; while, on the other hand, it is asserted that the urea is formed by the epithelium of the kidney from another body present in the blood. By the latter it is stated that there is no acumulation of urea in the blood after extirpation of the kidneys, but only after ligature of the ureters; and it has also been observed that kreatine triturated with kidney substance yields urea. Bernard, however, has shown that the operation of nephrotomy is followed by vomiting, and the passage of an unusual quantity of fluid by the intestinal canal. During this time, which lasts two or three days, there is no increase of urea in the blood, but the contents of the stomach and intestines are found to be strongly ammoniacal. This shows that vicarious elimination of urea does take place in the absence of the kidneys. At about the fifth day after the operation, the secretion of the gastric and intestinal fluids becomes arrested, and then, and then only, is urea found to increase enormously in the blood. Again, Meissner showed the presence of urea in the liver, and Parkes states that, when portions of the liver substance have been destroyed by disease, the urine is sometimes deficient in urea. This latter evidence undoubtedly points to the probability of the urea in urine not existing as such in the blood, but that it is formed from some antecedent, and that the great factory of this change is not the kidney, but probably the liver, though it is possible that the kidney may have some slight share in its conversion. The question of the vicarious elimination of urea and of its antecedents was then gone into, and a theory put forward as to the probable changes that kreatine undergoes in its conversion into urea. If kreatine is injected into the blood it reappears in the urine unaltered; but if acted upon by baryta water, thus undergoing hydrolysis, it yields many products, of which urea is the most important. While experimenting in this direction, the speaker found there was a considerable amount of uric acid formed, and he therefore put before the Society a statement of what he considered was the possible origin of the uric acid present in the urine.

If kreatine (methyl-glycocyamin) be acted upon by baryta water, the following changes occur:—

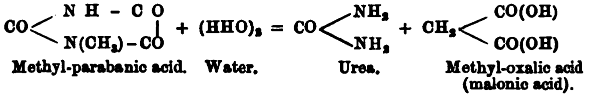


$$\text{(i.)}\quad \underset{\text{Kreatine.}}{HN=C\begin{matrix}\diagup NH_2\\ \diagdown N(CH_3)-CH_2-CO(OH)\end{matrix}} + \underset{\text{Water.}}{OH_2} = \underset{\text{Urea.}}{CO\begin{matrix}\diagup NH_2\\ \diagdown NH_2\end{matrix}} + \underset{\text{Sarcosine.}}{CH_2\begin{matrix}\diagup NH.CH_3\\ \diagdown CH_2CO(OH)\end{matrix}}$$

$$\text{(ii.)}\quad \underset{\text{Kreatine.}}{HN=C\begin{matrix}\diagup NH_2\\ \diagdown N(CH_3)-CH_2-CO(OH)\end{matrix}} + \underset{\text{Water.}}{OH_2} = \underset{\substack{\text{Methyl-hydantoin}\\ \text{(methyl-glycolyl urea).}}}{CO\begin{matrix}\diagup NH-CO\\ \quad\ \ |\\ \diagdown N(CH_3)-CH_2\end{matrix}} + \underset{\text{Ammonia.}}{NH_3}$$

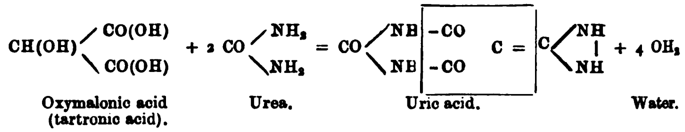
$$\text{(iii.)}\quad \underset{\text{Kreatine.}}{HN=C\begin{matrix}\diagup NH_2\\ \diagdown N(CH_3)-CH_2-CO(OH)\end{matrix}} + \underset{\text{Oxygen.}}{O_2} = \underset{\substack{\text{Methyl-oxalyl urea}\\ \text{(methyl-parabanic acid).}}}{CO\begin{matrix}\diagup NH-CO\\ \quad\ \ |\\ \diagdown N(CH_3)-CO\end{matrix}} + \underset{\text{Ammonia.}}{NH_3} + \underset{\text{Water.}}{OH_2}$$

Now, if methyl-parabanic acid assume two molecules of water, or be acted upon by potash, it yields one molecule of urea and one molecule of malonic acid, or of its potassium salt, thus:—



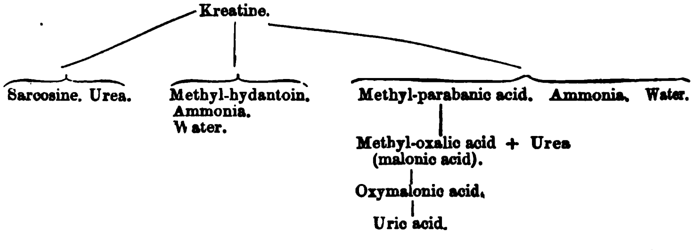
$$\underset{\text{Methyl-parabanic acid.}}{CO\begin{matrix}\diagup NH-CO\\ \quad\ \ |\\ \diagdown N(CH_3)-CO\end{matrix}} + \underset{\text{Water.}}{(HHO)_2} = \underset{\text{Urea.}}{CO\begin{matrix}\diagup NH_2\\ \diagdown NH_2\end{matrix}} + \underset{\substack{\text{Methyl-oxalic acid}\\ \text{(malonic acid).}}}{CH_2\begin{matrix}\diagup CO(OH)\\ \diagdown CO(OH)\end{matrix}}$$

just as, in the case of the oxidation of uric acid, we get parabanic acid, which is further converted into urea and oxalic acid, the lower homologue of malonic acid. Again, if the oxymalonic acid, formed by the action of oxygen on malonic acid, unites with two molecules of urea, we have formed at once the diureide of oxymalonic acid, which is uric acid, thus:—



$$\underset{\substack{\text{Oxymalonic acid}\\ \text{(tartronic acid).}}}{CH(OH)\begin{matrix}\diagup CO(OH)\\ \diagdown CO(OH)\end{matrix}} + \underset{\text{Urea.}}{2\,CO\begin{matrix}\diagup NH_2\\ \diagdown NH_2\end{matrix}} = \underset{\text{Uric acid.}}{\boxed{CO\begin{matrix}\diagup NH\\ \diagdown NH\end{matrix}\begin{matrix}-CO\\ -CO\end{matrix}\quad C = C\begin{matrix}\diagup NH\\ \ \ |\\ \diagdown NH\end{matrix}}} + \underset{\text{Water.}}{4\,OH_2}$$

That is to say, kreatine submitted to oxidation, as we may reasonably suppose it is in the body, yields urea as a by-product, and uric acid as a direct derivative from the methyl-parabanic acid obtained by the third reaction mentioned above, thus put in tabular form:—



This shows distinctly that uric acid is not an antecedent of urea, but that it occurs simultaneously with urea as one of the products resulting from the changes that kreatine undergoes before final elimination from the body.

November 17.

Election of members.

Mr. Ernest Clarke showed a case of so-called vicarious menstruation. The patient was 15½ years old, anæmic; she had not yet menstruated, but was subject to petechial rashes at regular periods.

Mr. Keetley read a Paper, "What is Tetanus?" of which the following is an abstract:—

He urged the evidence of tetanus being primarily a blood-poisoning, the almost constant fact of a wound being discoverable, the possibly constant fact of a wound having been present at some period of every case, the regularity of what might be termed the period of incubation in tetanus neonatorum, the regular order of the first appearance of its local symptoms, (comparable to the method of invasion of a scarlatina rash), the (alleged) occurrence of a peculiar smell, the rise of temperature, the influence of climate, the occurrence of the disease endemically and epidemically. The structural changes in the cord, inasmuch as they have been observed to lie chiefly round the blood-vessels, also suggest a poison circulating in the blood. At least it is not easy to imagine how any structural degeneration of the spinal cord could cause prolonged and violent muscular action. The changes in the kidneys, and the clear state of the mind are further evidences. So also, to some extent, is the fact that children suffering from undoubted blood-poisoning have convulsions, although adults have rigors. There is not a greater difference between "convulsions" and rigors, than there is between "convulsions" and tetanus.

Finally, a short notice was given of how an epidemic of tetanus at the West London Hospital was apparently eradicated by hygienic measures.

November 24.

Election of members.

Mr. Jessop read a Paper "On Genu Valgum."

December 1 (*House Physicians' Evening*).

Dr. Stowers showed a case of tubercular syphilide, and a case of lichen planus.

The House Physicians took typhoid fever as the subject for discussion. Mr. Barnes described the symptoms of the fever, taking in order the appearances of the tongue and abdomen, the pulse, the rash, &c. Mr. Smith spoke of the complications of typhoid affecting the skin, the respiratory and digestive tracts, and of gangrene, periostitis, and paralysis. Dr. King spoke of the prognosis, considering (1) the patient—age, previous illness, constitution, sex and nationality; (2) the patient's environment—hygienic conditions, the period of the disease at which he came under treatment, the danger of relapse, if solid food be given too soon; (3) the fever itself. There is no proportion between the gravity of onset and the severity of termination; if spots continue to appear during convalescence, no solid food must be allowed; a reduction in the daily excretion of urea is said to portend delirium. If, during the third week, a sudden fall of temperature be accompanied by an increase in the quickness of the pulse, especially if the patient is blanched, hæmorrhage from the bowels is likely to happen. The abdominal symptoms are proportioned to the severity of the attack. Tremors, especially if the mind is clear, violent delirium early in the fever and persistent hiccough are all of ill omen.

Mr. Oscar Clarke described the treatment. He called attention to the supreme importance of the nursing. The bed should be a mattress with a thin flock bed, with draw-sheet and mackintosh; never a feather bed. The patient should be encouraged to lie on his side. Scrupulous cleanliness must be observed: the whole body sponged daily with Condy's lotion or vinegar, under a blanket, and the mouth cleansed frequently. For bedsores, if broken, linseed or charcoal poultice, or one part of Friar's balsam with two of castor oil; if they seem indolent, nitrate of silver or tincture of myrrh. Cystitis must be guarded against. As regards diet, no solids till after a week of normal temperature. It is dangerous to give pills; and grapes must not be allowed. As regards medicine, the mineral acids seem to do good, the treatment by preliminary purgation seems hazardous. Constipation of more than four days should be treated with an enema; diarrhœa (which was rare during the late epidemic) may also demand treatment; so may hæmorrhage and vomiting. Mr. Clarke went on to speak of the treatment of abdominal pains with turpentine stupes; and of the signs of perforation. In the treatment of severe fever, sponging is better than packing, and packing than bathing. In delirium, opium is usually best; if there are lung-complications, Indian hemp. After Indian hemp, a small dose of opium has a greater effect. Bronchitis or pneumonia may complicate the fever, and require treatment. As regards the giving or withholding stimulants, the pulse is a good guide.

December 8.

Election of members.

Mr. S. Paget read a Paper "On Vegetable Pathology."

He pointed out that the diseases of plants have never been described, or arranged according to their likeness to animal diseases. He described first the degenerative changes which occur in plants, the change of young woody fibres into hard wood and cork and bark; the pigmental degeneration in autumn leaves and ripe fruit, and in the red pigment in the tentacles of the sundew (Drosera rotundifolia); the fatty degeneration which takes place in microscopic fungi deprived of their ordinary food by being grown in distilled water (these experiments were made by Dr. Cunningham in India during the last great famine); he found fatty degeneration alike in the fungi, in tadpoles kept without food, and in the bodies of men who died of famine (cf. Report of Indian Sanitary Commission, 1877); also the degenerative change by which sugar is formed in ripe fruits, and the excessive and destructive formation of resin (resinosis) round a wound in a resiniferous tree, or in weak and injured trees, or those weakened by bad soil.

Atrophy and hypertrophy are common diseases in plants. Growth may be arrested by increased pressure; and unduly increased by diminished pressure. Similarly, in the case of animal tissues, a fragment of skin which is grafted on to an open wound has an increased power of growth, the pressure of the skin round it having been removed. In other cases pressure may excite growth—thus, the tendrils and suckers of climbing-plants grow thick and strong when they are pressed against a support, and only then. Atrophy and hypertrophy may also be caused by changes in the supply of food to plants. Atrophy may occur spontaneously; the male generative organs in some plants, the female in others, become shrivelled, brown, tough and sterile; the disease begins in the bud, it is incurable, and may be propagated by grafts or by seed. Lastly, Darwin thinks that hypertrophy in plants, like secretion, may be set up by an impulse transmitted from a distance.

The common "canker" on apple-trees and pear-trees is a sort of chronic ulceration: the branch first cracks with the frost; then insects, living and laying eggs in the crack, irritate the wood and prevent complete healing; and masses of ill-formed wood are thrown out round the unhealed crack. The branch may become thickened on the side opposite to the open crack: this is said to be due to the removal of pressure by the destruction of the bark, but it is curiously like the thickening of the back of a bone when the front has been weakened by caries or necrosis.

Galls, considered apart from their use as lodging and food for the insects inclosed in them, are inflammatory new growths, due to the action of specific irritant poisons. Some of them are of very complex structure; others are simple fibrous tissue; and between these two extremes there are many intermediate forms.

In many trees (beech, holly, cedar, chestnut, lime), immediately beneath the bark, may be found rounded nodules or masses of wood, which may be to some extent analogous with the new growths of human pathology. These nodules of wood are "new formations, which in their development and growth are characterized by their independence of the rest of the body; they increase in size by virtue of their own inherent activity, which differs from, and is to a great extent independent of, the surrounding tissues." They lie just under the bark, between it and the new wood of the trunk; thus, they lie in the course of the sap as it descends from the leaves, and from the sap they draw materials for their growth, just as the trunk does. Some are at first connected by pedicles to the internal vascular system of the trunk, and are at first nourished in this way; others seem to be independent and unconnected with the trunk from the very beginning. As they grow they stretch the bark, till sometimes it gives way, and the exposed lumps become dry and shrunken and worm-eaten, and may at last fall to the ground.

These tree-tumours are, in their origin, buds that have failed of development. This is shown by their position between the bark and the fresh wood; by their having pedicles by which they are joined to the trunk and nourished from it; and by the fact that some of them put forth a terminal twig. They are buds, or masses of germinal matter, which have grown instead of developing. Some are plainly single growths, simple nodules of fibrous tissue growing from a single nucleus; others are made up of single growths fused together, and may attain a great size.

Cohnheim has lately made experiments in the transplantation of particles of fœtal cartilage into the anterior chamber of a rabbit's eye. He has succeeded in producing true cartilaginous tumours, and he infers that the origin of tumours is in some cases from definite pre-existing portions of germinal matter which lie dormant in the body, ready to be called into growth by some general or local change. To this teaching, the growth of these masses of wood, independent of the tree in which they grow, and beginning as undeveloped portions of germinal matter seems to bear witness.

Last, it may be worth while to notice how closely the action of the sundew (Drosera rotundifolia) and the pitcher-plant (Nepenthes) imitate the digestive and reflex nervous actions of animals. Darwin has shown that a real reflex action of great complexity takes place when the leaf of the sundew closes over its food; and that a separate impulse is transmitted, setting up the secretion of acid and ferment. And there are other instances in the life of plants of actions which most closely resemble nervous action in animals. Nor is the resemblance less curious and exact, even in the most minute details, between the secretion, composition and action of the acid and the digestive ferment of the insectivorous plants and those of animals.

Specimens, plants and diagrams were shown.

December 15.

Election of members.

Mr. Stretton showed a dissection of extra-uterine fœtation. There was a laceration of the right Fallopian tube, 1½ inch long; the uterus was not hypertrophied, nor its mucous membrane altered. Probably the fœtus had died two or three months before the mother, and the altered mucous membrane had been cast off at menstruation. The corpus luteum was in the opposite ovary.

Mr. Jessop read notes of a case of rupture of the liver and right kidney.

Mr. Gill read a Paper on "Rises of Temperature after Operations." An abstract is here given.

The above title was chosen for two main reasons:—

1. It is the most easily observed of all the signs of general disturbance of the system after operation.

2. The degree of pyrexia is, as a rule, proportionate to the amount of general disturbance, and especially so when the latter follows some local complication of the operation wound.

The study of rises of temperature after operation has been restricted to amputations, for by this means minuter comparisons may be made. It had been the Author's intention to confine the subject to one amputation alone—viz., that of the lower third of the thigh; but the small number of cases (and still fewer after-results, both local and constitutional) prevented this intention from being carried out.

All the cases were under the Author's care throughout the whole of their course. From want of space only one instance has been referred to, and one temperature chart adduced, as typical of each group of cases more or less similar as regards—

(α) general condition and age of the patient;
(β) character of the injury, and
(γ) nature of the operation.

I. Comparison of two cases in which the foot was amputated by Syme's operation for (α) injury and for (β) disease.

α. Temperatures of W. S., aged 15. Primary amputation of foot (Syme's):—

Day	1st.	2nd.	3rd.	4th.	5th.	6th.
Morning . .	...	101·2°	99·8°	101·4°	100·6°	101°
Evening . .	98°	101°	102°	100·4°	101·3°	

β. Temperatures of F. McK., aged 18. Amputation of foot (Syme's):—

Day	1st.	2nd.	3rd.	4th.	5th.
Morning	...	98·7°	98·4°	98·6°	98°
Evening	98°	98·7°	99°	98·6°	

From these may be inferred the effect of a violent injury upon the general condition of the patient; the injury is followed by shock; and after this by reaction, as is noted in the rise of temperature. There is, however, another element, beside the immediate effects of the injury, tending to create some disturbance in the system, and that is the being suddenly brought to bed. In a great many instances, from whatever cause, the temperature chart of patients who, by accidents of a very simple nature, are brought to bed, exhibits for the first day or two a rise amounting to two or three degrees. That this sudden change in the general habits of the individual is accompanied by some disturbance of the system is shown by keeping a healthy man in bed for the space of two or three days when his temperature will be observed to rise.

The temperatures of the "Syme" for disease will show that shock following the operation was but very slight as well also as the reaction, and that the patient had no other disturbance but what could very well be ascribed to these. How was this brought about? He had been gradually accustomed to the new conditions in which he was placed, by being kept in bed for six weeks before the operation; he had got accustomed to his diet, and all his organs were thoroughly examined and determined to be in a sound state. These form two very good types of the after-results of amputation for injury and disease, and clearly point out how great is the benefit to be derived from a gradual preparation of the patient, and how operations of great magnitude may be performed on those who thereby suffer no alteration in their general mode of living. This is very well shown in the following case:—

Temperature chart of W. B., æt. 4 years. Amputation lower third of thigh, for diseased knee:—

Day	1st.	2nd.	3rd.	4th.
Temp. Morning . . .	99°	98°	99°	98·8°
Temp. Evening . . .	97·2°	98·2°	98·4°	98·8°

Again, on the contrary, however much forecaution may have been taken in preparing the patient for an operation, some general disturbance follows, which has no other obvious cause but some mental irritability on the part of the patient; in some cases, if the bowels have not acted, the temperature rises and falls again after a purge.

In the exceptions to the general rule that the temperature rises to a rather high point after primary amputation, it may be adduced that the temperature is always above the normal for some few days after the operation, and that, as in amputation for disease, it reaches the normal on the second or third day. To conclude the remarks upon this division of the subject, the following case was adduced:—

A. B., æt. 6. Secondary amputation on the thirty-third day after compound fracture of the right leg:—

Days after injury .	30th.	31st.	32nd.	33rd.	34th.	35th.	36th.
Temp. Morning	100·7°	99·6°	100·2°	99·6°	...	99·5°	98°
Temp. Evening	103·7°	102·2°	103·4°	99·2°	100·4°	99·2°	

This case shows distinctly the less amount of risk in secondary amputation as compared with primary; and the causes above detailed explain why this is so. The history of the case also shows that the amputation replaced a greater by a less wound, and thereby enabled the patient to reach a normal temperature more rapidly than he would had the surgeon been able to preserve the leg.

II. The comparison of cases of the same operation, in nearly similar patients, for disease opens up a very wide field of inquiry and inference. The rise of temperature may or may not be accompanied by some local disturbance of the stump.

In those cases in which no local affection of the wound is apparent, besides what has been said above of some mental irritability and constipation, there must be taken into consideration the element of age.

The following example shows the degree of shock followed by reaction in an old man of 60, after amputation of upper third of leg for epithelioma of sinus lower down. Primary union:—

Day	1st.	2nd.	3rd.	4th.
Temp. Morning	98·4°	100·2°	101·6°	98·9°
Temp. Evening	99·8°	100·8°	99°	

He was kept in bed for a fortnight before the amputation, and the only element present to account for the pyrexia was the reaction following the shock caused by the operation.

But the majority of cases of disturbance after amputations for disease are due to some real complications of the wound; and a very common cause is retention of serous or sero-sanguinolent discharge in the deeper part of the wound. The skin wound heals by the first intention, and tension ensues, and the system is thrown into a state of fever; of this E. F. is an example, showing normal line interrupted by rise of temperature, caused by abscess formation; the rapid descent after incision on the seventeenth day, and evacuation of 3 oz. of pus, is well marked:—

Day after Amputation	14th.	15th.	16th.	17th.	18th.	19th.	20th.
Temp. Morning	98	98·2°	99·5°	99·8°	98·4°	98°	98·2°
Temp. Evening	98·4°	98·8°	98·6°	99°	100°	98·4°	

If, the wound healing by the first intention, there occur a sudden rise of temperature, combined with much localized pain in, and great swelling of, the stump, and if the patient be evidently ill, acute necrosis of the end of the stump must be thought of, and probably will be the cause of the disturbance.

Many cases of pyrexia will be found in separation of the flaps, or in gangrene of part of one of them. As in the case of W. P., amputation of thigh, lower third, for disease of knee, recurrent hæmorrhage; opening up of flaps, suppuration:—

Day . . .	1st.	2nd.	3rd.	4th.	5th.	6th.	7th.
Temp. Morning	...	100·4°	98·2°	98·4°	98·4°	99·8°	99·8°
Temp. Evening	99·4°	100·2°	98·6°	99°	99·6°	102°	

This patient was aged 48, and very irritable. Although every means was taken to induce primary union after arrest of hæmorrhage; these failed.

Temperature chart of a man, æt. 40, whose foot was removed by Syme's operation for sarcoma. Cause of disturbance : gangrene of flap :—

Day . . .	1st.	2nd.	3rd.	4th.	5th.	6th.	7th.
Temp. Morning	98·2°	99·8°	101·6°	100°	99·2°	98·6°	99·6°
Temp. Evening	101·2°	102	102·3°	101·4°	100·4°	101°	

In the following case is shown the disturbance following the separation of a silk ligature, which was cut short and retained in the wound; it acted as a foreign body :—

Day	1st.	2nd.	3rd.	4th.	5th.	6th.
Temp. Morning . .	...	99°	99·3°	102°	100·4°	98·6°
Temp. Evening . .	100°	100°	100·6°	966°	99·8°	

Sometimes the temperature rises, and remains high, although the wound does not present sufficient disturbance to explain the rise; minute examination of parts immediately above the stump must be made with a view to detecting tracking of pus upwards. This is illustrated by the following case of a man whose finger was amputated for disease; considerable amount of pus was let out in the forearm :—

Day . . .	1st.	2nd.	3rd.	4th.	5th.	6th.	7th.
Temp. Morning	...	99·2°	99·4°	102·2°	102·3	99°	99·6°
Temp. Evening	99°	102·6°	102·4°	102·8°	99·2°	101·6°	101·2°

In those cases where the disturbance is dependent upon some form of blood-poisoning, this can be estimated in the case of erysipelas by the cutaneous rash, and in the case of pyæmia, by the changes of the wound-surface, this becoming dry and assuming an unhealthy aspect, and by the occurrence of rigors; in those cases where the pyæmia runs a chronic course, it is very apt to be mistaken for rheumatism.

Mr. Jessop showed statistics of thirty-three major amputations by Mr. Willett. The primary fever was highest about thirty hours after the operation; the secondary hectic fever of suppuration was at some time between the ninth day and the twelfth. Operations on the tongue, and the removal of adenoma of the breast in girls, are followed by marked rise of temperature. He had a case of rigor lasting thirty minutes before primary fever, three hours after operation; and a case of severe secondary hæmorrhage without any rise of temperature.

Mr. Bowlby spoke of high temperature due not to local inflammation or pyæmia, but to reflex action. If shock can inhibit the production of heat, it may also stimulate it. In children a rise of temperature may be caused by pain or by fright; and in this way may be explained the high temperatures after operations on the tongue or for the removal of adenoma of the breast or after machinery accidents.

Mr. Ernest Clarke described the "fever of reaction," and the influence of antiseptic treatment upon it.

Mr. W. J. Collins pointed out that a high temperature can be produced in a limb after all its nerves have been cut, and therefore independently of nervous influence. He suggested that traumatic fever may, in the development of disease, be the ancestor of the specific fevers.

Dr. King said that in shock there is paralysis of the vasomotor nerves, and therefore an accumulation of the blood in the splanchnic vessels, like an internal hæmorrhage; and as venesection may raise the temperature, so may shock. As regards the relation of the nervous system to the heat of the body, some pathologists, he said, hold that fever is a direct transformation of nerve force into heat. Pain may cause a rise of temperature, but the intense pain of colic and of aneurysm do not seem to do so. The high temperature after machinery accidents may be due to pyæmia, since the wounds are usually very large.

Mr. Harding described a case of high temperature after a bite from a dog, with severe gastric disturbance imitating typhoid fever. He asked why the temperature rises after the breaking-down of adhesions under chloroform.

Mr. Hind, Mr. S. Paget, Mr. Stretton, Mr. Square, and Mr. Batten also spoke. Mr. Gill, replying, said that fever is due to cell-changes, not to nervous action; that sudden inaction of the muscles may alone cause a rise of temperature. He knew of no afferent nerves concerned in the production of heat, and of no cases of high temperature due only to nerve irritation.

January 12.

Mr. Hockin showed the heart of a boy 12 years old, having a punctured wound made with a penknife. The boy lived for a fortnight, and died with pleurisy, anasarca and passive effusion into the peritoneum.

Mr. Kendall read a Paper " On Curiosities of a Shilling Practice."

Although not wishing to defend the general run of shilling practice, I must still speak well of one with which I was for a short time connected. Everything tending to the comfort and well-being of the patients was provided. It is, as far as I am able to judge, the fault of the patients themselves that quackery is practised, for they insist on being treated for their imaginary ailments, and when put off with some simple mixture always return to obtain some more of that lovely liquid, and, indeed, will have no other than that originally prescribed. I remember a case in which aqua camph. colorata proved a sovereign specific for all aches and pains.

The hygiene of the poor is in a very bad state, for with them ventilation is at a decided discount, while dirt, heat and closeness reign paramount. It is, moreover, impossible to persuade them that disease is to be combated by cleanliness and fresh air, rather than by dirt and close rooms. There is every need of a properly regulated sanitary supervision of the dwellings of the poor. With all their failings, however, the poor have great faith in the doctor, and they generally bow to his decision in matters other than those already mentioned. If a doctor is given the facts of a case he is expected to know all about it without seeing the case itself. A woman came from Edinburgh to obtain the advice of my principal concerning a tumour growing on the inner side of her brother's thigh. The brother remained in Edinburgh. Some of the medical cases which came under my notice may prove interesting to you.

M. G., a pale, anæmic girl, 18 years of age. Supposed to have spinal disease. Menstrual functions irregular. Bowels constipated. No evidence of spinal disease or any organic disturbance. On second visit.—Pupils equal, not acting to light. Patient unconscious; not roused when spoken to; total anæsthesia. Breathing slow and regular. Pulse weak. In this state she lay for three days. I treated this case as one of hysteria, and the patient made a good recovery.

E. D., married woman, 24 years of age. Large family. Fell over a bucket, and struck her back against a stair-rail. After this she was unable to pass her water. There was no fracture, and no apparent injury of the bladder.

Treatment.—Free purgation, galvanism, catheterization; recovery in four weeks.

This appears to be a case of slight spinal concussion, causing temporary paralysis of the bladder.

C. L., man, 25 years of age. Hard drinker. Had all the signs of acute rheumatism, and after four days' treatment showed marked improvement. On the fifth the following curious fluctuations of temperature began :—

Day of Disease .	5th.	6th.	7th.	8th.	9th.	10th.	11th.	12th.	13th.
Temp. . .	99 5°	98·6	104·8°	107·4°	107·4°	107·4°	105·5°	105·5°	106·5

Day of Disease. .	14th.	15th.	16th.	17th.	18th.	19th.	20th.	21st.	22nd.
Temp. . .	107°	107°	107°	105°	99·8°	99·8°	99·8°	99·8	100°

Day of Disease	23rd.	24th.	25th.	26th.	27th.	28th.	29th.	30th.	31st.	32nd.
Temp. .	10 3	107°	105°	107°	107°	107°	106°	100°	99·8°	98·8°

On 17th day there was profuse perspiration. Pulse regular, full. B.O. iij.

On 29th day there was profuse sweating.

On 30th day, profuse sweating. B.O. iij.

After the 31st day the temperature began to decrease, and the patient made a good recovery.

This I take to be a case of high temperature during rheumatism.

I have found that when rheumatism is treated with salicylate of soda, relapse frequently occurs after the drug is discontinued.

Of 100 cases of small-pox :—

One case confluent. Never vaccinated.

Seventy-five cases discrete, with throat mischief. One mark.

Twenty cases discrete. Not complicated. Two marks.

Four cases discrete. Three marks.

The idea the poor have of the meaning of inflammation is peculiar. Provided there is no inflammation the patient is, they think, safe. I remember a mother who told me "the poultice had brought the inflammation beautifully out into the skin," because the mustard had acted as a rubefacient.

Theories are as old as Celsus, yet many of those I learned I think are unknown to you.

1. Potato skins, if eaten during the summer months, cause jaundice by adhering to the surface of the liver.

2. Normally the blood flows through the liver; but, when the organ becomes congested the blood flows over its surface and causes jaundice.

3. The skin consists of a number of small particles which are

closely adherent. Now, if by any chance the skin becomes pressed upon continually the particles become massed into a corn. As this grows, the oily fluid which normally exists beneath the skin, burrows into the substance of the corn, and so forms a bunion.

I once saw a family of five persons, in each of whom there was a permanent branchial fistula. I also saw one case in which the external ear of one side was absent.

January 19.

Mr. W. J. Collins read a Paper on "Jennerian Hypotheses concerning Vaccine."

Abstract.—The object of the Paper was to ascertain the views entertained by Jenner as to the origin, nature and properties of the cow-pox, how these had stood the tests of time and experience, and how they were related to the recent discoveries of M. Pasteur. The Author first inquired, What is cow-pox? remarking that the law had prescribed vaccination to the people, but the law had not vouchsafed to say what vaccination was. Jenner held the cow-pox to originate from "the thin darkish-looking fluid oozing from newly formed cracks in the heels of horses suffering from the grease," an opinion which "at first excited so deep and extensive disgust," that it was considered likely to damn the whole thing. That the horse-grease (or horse-pox) was capable of producing vaccinia when inoculated on man had been repeatedly proved, notably in a case which occurred at this Hospital, in 1877, under Mr. Langton. Others, however, like Messrs. Ceely and Badcock, considered small-pox and cow-pox to be identical in nature, and held that the best way to obtain "the true and life-preserving fluid" was to inoculate the cow with the virus of human small-pox; this hypothesis was important, for, if true, it would supply the minor premise to the vaccinator's syllogism; but unfortunately it was not true. *A priori*, it would be natural to suppose that, if the small-pox of man inoculated on the cow gave cow-pox, the cow's pox inoculated on man would give small-pox; but this no one pretended to be the case; and again, inoculation with Ceely's lymph had, in some cases, been followed by symptoms indistinguishable from true small-pox; while the attempts of the Lyons Commission and Dr. Klein to obtain vaccine à la Ceely had proved an absolute failure.

Hence it was held by Drs. Warlomont, Wyld, Renner and Mr. Fleming, with many others, that small-pox inoculated on the cow, when it produces anything, is true small-pox, and capable of propagating that disease by contagion. There was a corollary from the theory of identity of small-pox and cow-pox to the effect that vaccination was as protective against small-pox as small-pox itself, this was the position to which Jenner subsequently retreated; but Mr. Marson, of the London Small-pox Hospital, when before the Committee of the House of Commons in 1871, in reply to the question, "Do you consider small-pox itself as great a protection as vaccination?" said, "Yes, much greater, as you see by the returns." Hence this second doctrine must likewise be discarded, and the protective power of vaccination be held to lie somewhere between, none at all, on the one hand, and much less than that of a previous attack of small-pox on the other.

Jenner did not believe in spontaneous cow-pox, the so-called calf-lymph, he called it spurious and condemned it as worthless, yet this was the only lymph which is now considered the right and proper thing to use. That this lymph was innocent of syphilis was a blessing to be thankful for, but that it was not free from the risk of communicating tuberculosis (a very common disease among bovines) had been directly shown by the experiments of M. Toussaint.

Jenner did not believe in re-vaccination, nor that several marks gave more protection than one; now-a-days septennial, triennial, and even annual re-vaccination is recommended; and at the very least four well-marked, foveated, depressed, not puckered, thimble-like scars, not less than one-third of a square inch in area are required if we would save ourselves alive.

Lastly, Jenner held swine-pox to be an excellent substitute for vaccine, and considered cow-pox to be as good against dogs' distemper as it was against human variola.

The Author then proceeded to deal with the recent researches of M. Pasteur, which it had been asserted had come to the rescue of Jenner, and had at last put vaccination upon a "scientific basis." Nevertheless they did nothing of the kind, and Pasteur himself declined to draw any analogy between the two sets of facts, and explained that he used the term vaccination merely as "a compliment to Jenner." What Pasteur's experiments do go to prove is the value not of vaccination, but of *inoculation*, as a prophylactic against small-pox; for in this case we are dealing with the same virus, not a different one, as in vaccination—the analogy is complete and the deductions logical. Moreover, it already appears that Pasteur's "vaccinations" for anthrax are not free from considerable danger by rendering other severe but latent diseases more fatal, as many as 5 per cent. being sacrificed in the process of salvation! Now that, thanks to Pasteur's experiments, we are assailed with a specific vaccine for every zymotic under the sun, and men like Lister look forward to the Pasteurian millennium, when medicine shall sanction, and Parliament shall enforce, the inoculation of every individual with every zymotic, in order to preserve the nation in perfect health, the time has come to count the cost of this paradoxical prescription, to decide between universal vaccination and universal sanitation; if the inoculationist be right, to follow him—if the sanitarian, then to follow him. The sanitarian, in opposition to the inoculationist, taught that man was naturally healthy, and not prone to disease; that health, and not a chronic state of cow-pox was the antithesis to small-pox; and that, so long as man is kept in healthy surroundings, he will, by the inherent resistance exerted by healthy blood towards disease-germs, enjoy complete immunity from small-pox or any other of the class of diseases to which it belongs. That small-pox and its allies are the Nemesis of hygienic shortcomings. That its causes are amenable to sanitary influences outside the body, and by such alone can it be satisfactorily and successfully combated, and that where these are neglected there small-pox will arise and prevail; and, in conclusion, he ventured the opinion that the half-truth on which vaccination is founded must before long give place to the whole truth of sanitation, whose aim is to abolish disease altogether, not to disseminate and perpetuate it, to invigorate health, and not to try to improve upon it by substituting "a permanent morbid condition of the blood."

The following table was exhibited:—

London Small-pox for Thirty Years.

	Population.	Deaths from Small-pox.
1851–60 . . .	2,570,489	... 7,150
1861–70 . . .	3,018,193	... 8,347
1871–80 . . .	3,466,486	... 15,551

January 26.

Election of members.

Mr. Bowlby showed a specimen of intestine perforated by a fish bone.

Dr. King read a Paper "On Fits."

February 2.

Medical discussion.—Dr. Percy Kidd opened the medical discussion on Hæmoptysis.

February 9.

Election of members.

Dr. Stowers showed the original case of molluscum fibrosum described and figured in 1866 by Mr. Hutchinson for the Sydenham Society; he also showed a picture of primary syphilitic sore on the cheek.

Dr. Stowers then read a Paper on "Skin Diseases in their relation to Syphilis."

Abstract.—The Author pointed out that lack of interest in the study of Dermatology among students is chiefly accounted for by the natural difficulty which at the outset confronts those who attempt to start with classification, or nomenclature, before any practical knowledge has been acquired, particularly, as the arbitrariness of all classification is at present unavoidable. Too short a time also is devoted to enable the student to familiarize himself with a class of diseases, the distinctive features of which are so apt to be confused. The absolute necessity for correct diagnosis is well exemplified by the results of a too common error—namely, of mistaking simple cutaneous affections for the results of constitutional syphilis.

Again, the urgent need of correct diagnosis in parasitic, and therefore contagious, diseases, was pointed out, besides the impossibility of successful treatment if the immediate cause is overlooked.

The frequency of syphilitic cutaneous manifestations during some recent observations had not exceeded 5 per cent. in hospital out-patient practice, whereas the prevailing idea is that the majority of all skin diseases is due in some degree to a specific cause. The standing rule as to hernia and strangulation, "if in doubt, operate," seems to have its parody in the misguiding impression concerning an eruption, "if in doubt, call it syphilitic."

Such a condition as syphilitic eczema does not exist. Skin diseases proper, whether constitutional or local in their origin, are generally well defined, and usually run a more or less definite course.

No distinct line of demarcation can be drawn between "secondary" and "tertiary" syphilitic affections.

"Secondary" eruptions are, however, more transient in their character, more superficial and occur earlier, within three months (when uninfluenced by treatment) of primary inoculation. Moreover, the natural tendency of this class is to recover, while that of "*tertiary*" affections is in the opposite direction.

Differences in the appearance of infantile syphilis are accounted for by the age of the child, not by the mode of infection.

Vaccino-syphilis, met with in the rarest instances, is associated with a primary sore at the site of inoculation.

The Author pointed out that it is often supposed that syphilis produces its effects upon the skin by modifying the simple eruptions, or those which are non-specific in their origin—*i.e.*, that the cutaneous affection in many instances is identical with that of the commoner kind. This view is as misleading as it is unsound. The manifestations of dermato-syphilis are both peculiar and distinctive. For this reason such terms as "syphilitic" psoriasis, and "syphilitic" lupus, should be entirely omitted from the category of disease.

The following constitute the general characters of the dermato-syphilides:—(1) A papule usually forms the base upon which the ultimate lesion is developed. (2) The eruption is apt to occur on any part of the cutaneous surface, and is often conspicuous for its polymorphous character. (3) In certain stages the colour is distinctive. (4) Subjective symptoms, *e.g.*, smarting, itching, &c., are not marked, and are usually absent. (5) The eruption is prone to certain localities or sites. (6) Other evidences of constitutional syphilis usually co-exist. (7) The so-called "tertiary" affections show marked tendency to recur.

Dr. Stowers concluded by repeating the caution of Dr. Latham—"Let a man use his own experience as best he can for the present, but let him not, upon the strength of it, rebuke the experience of all past times, and dictate to the experience of all future; for, if he live long enough, nothing is more likely than that he may find himself fallen under his own reproof, and inconveniently confronted by his own maxims."

February 16.

Election of members.

Dr. King showed a case of cheloid. The disease was eleven years old, and was due to a blister applied for pericarditis. It was painful and tingling. It was slowly becoming absorbed. He also showed a case of scleroderma. The patient was a middle-aged women; the disease was arranged in symmetrical patches over the elbows and palms, causing some contraction of the fingers; there was also a patch at the back of the neck. The disease was of two years' duration; it was not painful. It did not appear to be hereditary. A section of skin similarly diseased was shown under the microscope.

Mr. Bowlby said that the cheloid is closely allied to the less malignant sarcomata, both by its recurrence, and by its being due to injury; and that cheloid is a growth in the scar of an injury; sarcoma is a growth of the same nature, but not preceded by a scar.

Mr. Lockwood said that the absorption of true cheloid is very rare.

Mr. Charles Paget presented to the Society a portrait of Mr. Callender, and spoke of his work in embryology, on diseases of the vessels and on fractures; of his constant teaching of neatness, cleanliness and gentleness, and of his never-varying kindness to all students.

Mr. Ernest Clarke read a Paper on Mortality in Anæsthetics.[1]

February 23.

Election of members.

Mr. Ernest Clarke showed some microscopic specimens of the human embryo.

Mr. Charles Paget read a Paper "On Tobacco."

Abstract.—The Author began by saying that the subject of his Paper was one of common interest to almost everybody, and yet was so misrepresented by persons of extreme views, that he hoped that, by laying before the Society certain of what he believed were facts founded upon experiment and observation, he might offer to the members a fair and open field for discussion.

After the chief points of botanical and toxicological interest of the plant Nicotiana Tabacum had been briefly mentioned, attention was drawn to the difference in the amount of nicotine present in different kinds of tobacco, the amount being twice as large in Virginian as in Turkish or European; and that although in commercial tobacco there is about 4 per cent. of nicotine present, there is only a trace in snuff, due to the fact that the latter is made from the stalks of the plant, which contain only a small amount of nicotine, while the tobacco for smoking purposes is made from the pure leaves. The uses, and the methods of the uses, of the plant, both medicinal and social, were discussed; and the Author passed on to consider the question whether *tobacco-smoking* was a frequent cause of dyspepsia. The conclusion that he came to was "that it is only in exceptional cases of excessive smoking, whereby a general derangemant of the constitution has been effected, or in some peculiar idiosyncrasies, that dyspepsia is possible through smoking alone; and that, under ordinary circumstances, the dyspepsia, if due to tobacco, depends upon the unwise use of it, in which the effete matters are not got rid of by combustion as far as possible." By "the unwise use" is meant snuff-taking or chewing, whereby matters, such as the pyridine bases and their salts, are brought into actual contact with the gastric mucous membrane. These salts are extremely irritating to mucous membranes, so that this continued introduction into the stomach naturally causes dyspepsia; but in smoking they are burnt and partly volatilized, so that they cannot act in the same manner upon the stomach. The Author believed that the influence of smoking was mainly over the nervous system, and that the pneumogastric was the nerve chiefly affected. He stated also that careful observations over an extended period of time had led him to believe that dyspepsia was rarely caused by moderate smoking, although it frequently occurred in smoking men from other causes.

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[1] This Paper is published separately.

Certain experiments were then detailed which were meant to show what became of the various constituents of tobacco in the process of smoking, and also how they were differently disposed by the smoking of pipes or cigars.

The next question raised was whether dry or moist tobacco should be smoked, and the conclusion come to on this point was that either extreme should be avoided, and that the medium condition of ordinary tobacco as sold in tinfoil packets, was not only pleasantest but least harmful. In support of this conclusion, two experiments were described, in which it was shown that, as tobacco contains 88 per cent. of water, any artificial addition of water would interfere seriously with the proper combustion of the tobacco, and that the increased suction, which in consequence would be required to keep up the temperature of the burning tobacco, would draw into the mouth many of those irritating matters which were previously shown to be injurious to the gastric mucous membrane. But, on the other hand, it was also shown that in the smoking of extremely dry tobacco the combustion would be more than ordinarily rapid, and the effects necessarily more quickly felt, owing to the increased ease and rapidity with which the various products would be taken into the system. Attention was also drawn to the fact that the differences of climate seem to influence the mode of using tobacco, as well as its condition when smoked. For in India it is usual for dry cigars to be smoked, and rare for pipes to be smoked with ordinary Virginian tobacco as in England; and, still further, it has been noticed that men sometimes cannot smoke with comfort, in a city like London, the same amount of tobacco that they can in the country.

The Author then briefly considered the various theories with respect to the effects of tobacco upon the circulatory system, and showed sphygmographic tracings taken from himself and a friend. He explained that they were taken while he and his friend were sitting quietly without eating or drinking, and after they had smoked in pipes about two drachms of ordinary bird's-eye tobacco. The tracings showed intermittency, irregularity and excessive dicrotism of the radial pulse, and were, in the Author's opinion, more valuable as showing the influence of tobacco on people accustomed to smoking, and having healthy hearts, than if they had been taken from a non-smoker, in order to show some extraordinary violence of effect.

Here the Author passed on to what he considered, from a medical point of view, the most interesting facts about tobacco—namely, the effects on those engaged in its preparation for use. And he took this opportunity of thanking the Messrs. Wills of Bristol for the kindness and courtesy which they had shown him, and for the assistance they had given him in getting the information that he wanted. He then said:—" Of the effects of poisonous doses of tobacco none, I suppose, are so well known as those of nausea, vomiting, fainting and giddiness. These may be, and often are, the signs of oversmoking, and have been experienced by almost all regular smokers at some time or other of their lives. And it seems reasonable to suppose that, if smokers feel at times such sensations as these, still more must they be the experiences of those whose daily work lies in an atmosphere of tobacco undergoing all sorts of manipulations, and subjected to all kinds and variations of temperature. Still these experiences are not constant with the workers in the factories. True it is that on their commencing this work they do suffer, and that considerably, but not for long. In three weeks or so they have become entirely acclimatized, and their sufferings are at an end. Speaking of course generally, the workmen and workwomen are all healthy. They look so at any rate; and I may say with truth that, in all the factories of different sorts that I have visited in England, it never has till now fallen to my lot to see workers, confined all day in factories, look so well and hearty as they do in the Bristol tobacco factory. The complexions of all, and especially of the girls, are excellent; they are full-grown and apparently well developed. The ages attained by the workers is that usually accorded to mankind. Some have already reached the age of seventy, and many have been there over forty years, working, some of them, in one part of the factory and then in another. After the first unpleasant symptoms have passed away, the workers enjoy good health. There were pointed out to me several men who came there puny lads; they are now strong-looking, full-grown, healthy men, having thick beards, and good colour in their cheeks—and all this after about two or three years work. With regard to the snuff-workers things are not so pleasant or cheerful. They suffer much at first from working in rooms subjected to an intense heat, and also from nasal and pharyngeal catarrh, which is caused doubtless by the dry heat and the atmosphere of tobacco-dust in which they work. With some these symptoms wear off in time. With others it is necessary to transfer them to other parts of the factory; and I believe that it is usual not to keep any for too long a time in this snuff-department. It is certainly the most trying post in the factory. The workmen are remarkably exempt from inflammatory and epidemic diseases. Perhaps the best example of this that I can give is that during two epidemics of cholera which have occurred in Bristol, and in which the death-rate was high, not one single man or woman from Messrs. Wills' factory was seized with that disease. Several who have worked there for about thirty years told me that they never had taken physic, nor ever had any need for it during that time. And it is interesting to note that rheumatism is almost unknown, despite the extreme variations of temperature to which the workers are exposed. The appetite of the people is very good. Some told me that they could eat anything! With regard to drink, the majority of them never drink stimulants during the day, and many are teetotalers. They are the best workers. I was anxious to find some cases to examine for tobacco-amaurosis; but they were not to be found. With regard to the much-vexed question as to whether or not abortion is induced in the female workers, I have satisfied myself so far that it is impossible with the existing knowledge of the subject to make any definite statement. With regard to the death of the workers, although they reach a good age and often a great one, yet they generally die from dropsy complicated with heart-disease. And this is an interesting fact, pointing as it does to the influence that tobacco has upon the heart and circulation."

After a few words on the moral influences of tobacco, in which the Author maintained that the moderate use of tobacco was often most useful, and that the risks of excessive smoking were too serious to be lightly incurred, the Paper was brought to a close.

March 2 (*House Surgeons' Evening*).

Election of members.

Mr. Fletcher described the case of a boy of 18, suffering from hip-disease, who passed by his urethra a piece of bone about as large as a nasal bone. He had an attack of cystitis a year ago, probably due to the passage of the flake of bone into the bladder.

The House Surgeons introduced the discussion on Injuries of the Head. Mr. Fletcher spoke of the difficulties of diagnosis and prognosis in these cases, and urged the need of diligent work and careful collection of cases, with comparison of the different symptoms presented by them. Mr. Hockin described concussion, and the general treatment of it; and read several interesting cases, including that of a blind patient, who was drunk at the time he suffered concussion; and one where the concussion was complicated by uræmic fits. Mr. Mason spoke of the use of the trephine, and related a case where no pus escaped on puncture of the dura mater, though the dura mater bulged through the wound made by the trephine; but after a fortnight had passed, a slough of brain substance came away, to the great relief of the patient. He quoted the advice of Pott and of Hunter as to trephining, and pointed out that the operation is much rarer than it was. Mr. Herringham enumerated the different places where a clot may form—viz., in or under the scalp, or beneath the pericranium; within the bone, between it and the dura mater, in the membranes, or in the brain-substance. These clots may either degenerate and suppurate—especially if they are situated in the bone, though probably the degeneration of a clot in this situation is due to some necrosis of the bone. They may dry up, and leave a fibrous mass in their place; or their solid elements may disappear, leaving a collection of serous fluid; lastly, they may become organized, and even cartilaginous. In the surrounding tissues they may set up fibrous deposit, sometimes reaching ossification, as in subpericranial cephalo-hæmatomata, and sometimes lead to the formation of a perfect serous membrane enveloping the clot.

In fracture, the table farthest from the blow is most cracked and most depressed. This is due simply to there being less resistance behind that part of the bone. In a piece of wood perforated by nail or bradawl exactly the same thing occurs.

Two theories are held of concussion. The first, that it is simply contusion. This is supported by the invariable presence of extravasations. The second, that it is due to nervous shock; which rests on the varying and unimportant characters of the lesion, and is paralleled by death from electric shock. The latter is probably the truer.

The principal interest in compression which is due to bone, blood, lymph, or pus, lies in the process by which the nervous system endures and overcomes the injury. Recovery of functions, or absence of symptoms, have been known after depressed fracture, thickened membranes, tumours, abscesses and hæmorrhages in the skull, in Pott's disease, and even in one case where the whole hemisphere had sloughed away as a cerebral hernia. Such are called cases of adaptation of the nervous structure; but this is a tautology, not an explanation.

Specimens were shown illustrating the various points of pathology.

Specimens of drugs and pharmaceutical preparations were shown after the meeting.

March 9.

Dr. King showed a case of lateral sclerosis, with vertical nystagmus.

Mr. Griffith showed two specimens of abnormal branches of the aortic arch.

Mr. Griffith read a Paper on "The Diagnosis of Primary Syphilis."

In discussing this subject it is essential that we should be precise and definite in our meaning and use of terms, which might otherwise convey very vague ideas to many of us.

By syphilis I mean that disease which, in the great majority of cases, follows impure connection, and manifests itself at first by an indurated ulcer at the seat of infection, and within a definite period is followed by a train of symptoms which show how completely the whole organism is affected, thereby placing this malady in the list of constitutional diseases, and distinguishing it from a local disease acquired in the same manner, but whose effects are limited to the seat of infection and one or more of the neighbouring lymphatic glands.

And let us once and for all give up the terms hard and soft sores as characterizing, or being diagnostic of, the two primary lesions, for the sufficient reason that they are not always so.

What terms shall we replace them by ?

Infecting and non-infecting sores ? Certainly not, for neither of them is the source of infection to the person who has acquired them, and both are infecting to any second individual who ventures on a too intimate acquaintance with them.

The best terms that I know of are, for the one, "the initial lesion of syphilis," or "the chancre," and for the other, "the chancroid."

There are two principal theories held at the present time in regard to these: firstly, the dualistic theory of Bassereau, which states that the two are quite distinct in their nature, and this theory is based on very important grounds, and is largely held by writers at the present time in England, France and America; secondly the unicist theory of Ricord, which is held by some most eminent authorities who believe that the two are varieties of one and the same disease.

Now, whichever theory we regard as the most correct, we must all agree as to the vast importance of being able to make an early diagnosis between the two.

A patient comes to us with a sore. Can we tell him whether his sore is a chancre, and that he has contracted a disease (syphilis) which may cost many lives, and perhaps his own, or that he has a perfectly harmless ulcer (a chancroid), which will soon get well and leave him none the worse? And since we cannot in every case do this, our endeavours to improve our knowledge should be excited to the utmost.

Before I discuss in detail the group of symptoms on which we must rely for making our diagnosis, I will ask you to picture to yourselves the manner in which a student frequently makes his diagnosis in the surgery or out-patient room.

The patient enters, and the dresser inquires into the nature of his case. The patient mumbles something as he unbuttons one or two buttons of his trousers and exhibits as much of his penis as his modesty permits.

The dresser, who has already provided himself with a small piece of lint, proceeds to inspect the protruding organ. What does he see? One or more sores on some part of the genitals, and, guarding his fingers with the lint, he gently squeezes the sore and tries to satisfy himself that it is hard or soft, and having done this, more or less to his satisfaction, his diagnosis is complete, and is, in my experience, more often wrong than right. When asked if the patient has syphilis or not, he is unable to say; he can give no reason of value for his diagnosis, which is not a diagnosis at all, but a mere guess founded on his opinion of one symptom, and that a most uncertain symptom, presenting great variety and rarely of such typical distinctness as to be alone sufficient even to the most experienced.

The student is not much aided in this respect by some of our most frequently used text-books, where these diseases are described in such a way as to leave him in an almost hopeless labyrinth of perplexity; ever since John Hunter described the induration of a hard sore, his whole energies have been directed to this one symptom.

During an interregnum in the winter of 1880, pending the election of an assistant surgeon, I had charge of the surgical department of the surgery, and it was customary for men who were preparing for the "final college" to attend, and there the fact was impressed on me which I had so often noticed before, that a large number of men had no system in their diagnosis of sores, and consequently were frequently wrong in plain and well-marked cases. So I drew up a few heads for their guidance, and some of the men took the trouble to write out notes under the several heads, and to append their diagnosis.

There is nothing new in the details of this scheme, nothing but what any one accustomed to these cases knows quite well; yet I think it is of value in directing attention to points very important, but likely to be passed over, and in leading to habits of systematic procedure which are as essential to diagnosis as to any other scientific investigation.

There are two pieces of advice I would suggest to any one who wishes to carry out this plan: get rid of the terms, hard and soft sores, and let the object of your diagnosis be, has the patient syphilis indicated by the presence of a sore and other very important symptoms, or has he the simple local ulcer, the worst result of which is or may be a suppurating bubo?

Secondly. Hospital patients especially require the most careful cross-examination as to dates; but as soon as they find you are really interested in their cases they will do all they can to help you, and their history is often of great value.

I have not arranged the heads of the scheme in order of importance, but simply in the order in which I usually take them, and place the symptoms which are in favour of a diagnosis of chancre in the left half of the column and of chancroid in the right, if neutral in the centre.

1. As to the number and situation of the sores, how will these aid our diagnosis?

Syphilitic sores are usually *single*, but not rarely multiple, I do not remember to have seen more than five. Three is not a rare number, and they may be seen in a row on the corona, or in the furrow immediately behind it, or distributed on the glans, sheath and scrotum. Fournier has recorded two cases of nineteen and twenty-three sores, the latter in a woman; and Mr. Lockwood a case in which fifteen were present on the corona.

Chancroids are most commonly *multiple*, though not unfrequently single.

As to Situation.—Either form of sore may appear on any part of the genitals. This opinion is confirmed by the statistics of Fournier and Ricord, the former has recorded the situation of 445 cases of chancroid in men, the latter 471 cases of syphilitic sores, also in men, and a comparison shows their close similarity.[1]

Our diagnosis then is not much aided by situation and number, though multiple sores are in favour of the chancroid.

2. *As to Shape.*—We are taught that the chancroid is usually circular and deep, that is to say, extending through the mucous

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[1] I know of no case of supposed chancroid on situations other than the genitals and their immediate neighbourhood, whereas we frequently see the syphilitic sore on the lip, eyelid, finger, or female breast; this is a remarkable fact, and wants explanation; we can readily understand how the wet nurse is infected by the syphilitic baby she is suckling or kissing, but not why the surgeon's finger should escape the lesser and more easily inoculable form of disease and be infected by the other.

One important circumstance may be the fact that the chancroid, being inflamed and tender, examination is resented or even prevented, whereas chancres may run their whole course without attracting the attention of the patient.

Scheme for Diagnosis between Chancre and Chancroid.

The symptoms which are in favour of a diagnosis of chancre are placed in the left half of a column, of a chancroid in the right, if neutral in the centre.

Situation and Number of sores.	General characters. Shape, depth.		Inflamed or not.		Indurated or not.		Site and condition of inguinal glands affected.		Length of incubation, or days between infection and appearance of first symptom.		Duration.	Remarks.	Diagnosis.		
	Chancre.	Chancroid.													
Glans	Irregular	Circular	Not inflamed	Inflamed	Slight	None	Both sides	Right, left, or both sides	Incubation	No. of days	...	Additional symptoms	Chancre	Chancroid	
Furrow															
Prepuce	...	...	Dry	...	Considerable	Slight	...	...	...	...	...	Previous treatment, &c.			
Sheath			Discharging												
Single. Two or more	Superficial	Excavated	Not tender	Tender	Circumscribed	Diffuse	Distinct	Matted							
							Shotty	Inflamed							
							Almond	Suppurating							
Right	Excoriation	...	Serum	Pus	Extreme	...	Cluster	None or single							
Left															
Central															
Examples.															
1. Glans Right	Oval		Not inflamed	...	Considerable	...	Both	...	21, about	...	3 weeks	Caustic	+		1.
			Not tender				Clusters								
Single	Superficial	...	Dry	...	Circumscribed	...	Amygdaloid	...	...	...	...	...	...		
2. Prepuce.	Circular		...	Inflamed	...	None	...	Both single	...	3 or 4	10 days	...	...	+	2.
				Pus											
Both sides. 4	...	Excavated	...	Tender	...	...	...	Inflamed	...	...	...	...	...		
3. Prepuce Left	Irregular		...	Pus	Considerable	Not distinctly circumscribed	Both	...	14 days	...	4 weeks	Gon. 1 week before sore. Induration diminishing.	Uncertain		3.
Single	Superficial edges raised	...	Not tender	...	...	...	R. shotty	L. inflamed	...	...	...	Ulcer increasing.	...		

membrane or skin, and its walls perpendicular, giving it the appearance of having been cleanly punched out. The syphilitic sore is a mere abrasion, or at least shallow; if apparently deep, its depth is due to the heaping up of its indurated margins, which are not cleanly cut, but irregular and bevelled off, and these conditions, when present, are very important aids to diagnosis, and should be accurately recorded.

3. *The Presence or Absence of Inflammation.*—Before we regard this as an aid to diagnosis we must first satisfy ourselves of the absence of any condition which might complicate or interfere with the natural course of the sore, as a phimosis, excessive irritation from dirt, caustics, or other causes, a gonorrhœa, then we may gain important aid by the presence or absence of inflammation —*i.e.*, pain, redness, swelling and a purulent discharge.

A syphilitic sore is essentially non-inflammatory; a chancroid is the evidence and result of destructive inflammation. How often do we hear the same story, "I thought nothing of it for some days, because it gave me no trouble whatever," or the converse, "I felt something was the matter at once, and on looking at it found this sore." Our diagnosis might often be made on these statements.

Chancroids, then, are inflamed, red, swollen, and *tender*, and discharge pus. The syphilitic sore, on the other hand, is not inflamed, but extremely indolent, dry, or discharging a small quantity of serous fluid, enlarging very slowly until subjected to the magic influence of mercury.

I would direct your special attention to tenderness as common to the chancroid, but rarely found in the unirritated syphilitic sore. Of course it is distinct from painfulness, and is discovered in the same way as induration, by gentle pinching.

4. *Induration.*—When present and well marked, this is perhaps the most important symptom, and therefore deserves most careful consideration.

I have never seen nor heard of a case in which constitutional symptoms have not appeared after the presence of well-marked induration; but in this lies the great difficulty, that its time of appearance and duration vary greatly in different cases, and I would say that, in the absence of well-marked induration, our only hope of a correct diagnosis depends on the balancing of the results of a systematic examination made on the lines of this Paper, and of this I have had proof more than once.

Now, what is induration? I shall not attempt to describe it in my own words, for I have copied John Hunter's own description, which I will quote presently.

Microscopically.—Sections of the chancroid resemble those of any inflamed simple ulcer, the surface showing a destructive inflammatory change when in an active stage; or granulations and a healing edge in the reparative stage, beneath these the usual cell infiltration.

In the syphilitic sore there is, in addition to the cell infiltration, an hypertrophy of the connective tissue, showing itself in the early stages as a delicate fibrillar network enclosing cells which later become developed into well-marked bundles of fibres.

The coats of the blood-vessels also undergo changes indicative of chronic arteritis, as sclerosis and stenosis, and this, according to Auspitz and Lenna, commences in the outer coats and leads to a swelling of the endothelial coat in the arteries, and to an active proliferation in the veins, though, curiously enough, the lymphatics do not appear to be affected; and with this opinion Cornil agrees (Leçons sur la Syphilis).

At the beginning of this century it seems to have been the general opinion that syphilis was unknown in Europe until the close of the 15th century, when some attributed it to Columbus' sailors, who landed at Barcelona in 1495, and were supposed to have brought it from America. Anyhow, a year later, it broke out in the armies of the French and Neapolitans, who were engaged in a dispute about the kingdom of Naples, and, in rival gallantry, the French termed it the "Neapolitan disease," and the Neapolitans in return called it the "Mal des Galles."

The earliest mention of induration I have met with is in a case described by Nicolas Massa in 1536 (recorded by Dr. Friend), who says that "ulcers, if in the penis and callous," afford "demonstrative proof of their being venereal."

In the accounts of cases after this time, induration is frequently mentioned as a symptom, but it did not take its leading position until Hunter described it in 1786.

I have copied an extract from Hunter's Treatise on the Venereal, p. 319 of the second vol. of Palmer's edition of his works. He did not see the distinguishing characters of the different forms of sores, and made the greater mistake of including gonorrhœa as the same disease of a mucous surface as the sores are of a cutaneous. He says:—

"This, like most other inflammations which terminate in ulcers, begins first with an itching of the part; if it is the glans that is inflamed, generally a small pimple appears full of matter, without much hardness or seeming inflammation, and with very little tumefaction, the glans not being so readily tumified from inflammation as many parts are, especially the prepuce; nor are the chancres attended with so much pain or inconvenience as those on the prepuce, but, if upon the frænum, and more especially on the prepuce, an inflammation more considerable than the former soon follows, or at least the effects of the inflammation are more extensive and visible. These parts, being composed of very loose cellular membrane, afford a ready passage for the extravasated juices; continued sympathy also more readily takes place in them.

"The itching is gradually changed to pain; the surface of the prepuce is in some cases excoriated, and afterwards ulcerates. In others a small pimple or abscess appears on the glans, which forms an ulcer.

"A thickening of the part comes on, which at first, and while of the *true venereal kind*, is very circumscribed, not diffusing itself gradually and imperceptibly into the surrounding parts, but terminating rather abruptly. Its base is hard and the edges a little prominent."

In this description, the chancre and chancroid, the inflamed and the non-inflamed sore, the simple excoriation and the ulcer, the indurated and non-indurated sore are intermingled; but in the last few lines we have that graphic description which will never be forgotten and which we immortalize by affixing Hunter's name to the humble, I might say shameful, but I suspect none the less likely to be immortal, chancre.

I was glad to read this description, as we often hear of some particular form of indurated sore being or not being an Hunterian chancre. Our text-books are not free from mistakes on this point; Erichsen, Lee in Holmes' System, Bumstead and Taylor all give different and inaccurate accounts of the Hunterian chancre.

The latter say: "If the name Hunterian chancre be retained, it should be applied exclusively to the less frequent form of chancre which Hunter designated, and which is characterized, in addition to the induration common to all forms of chancre, by a degree of ulceration that involves the whole skin or mucous membrane."

I think we shall be more accurate if we use the term, "Hunterian induration," which is the essence of his description, and when present is easily recognized.

Abernethy, whose name is remembered with more than respect at this Hospital, and especially by this Society, over whose deliberations he so constantly presided, and to whose influence so much of what is of value in its work is due, was evidently at one time engaged on much the same subject as we are to-night.

He believed that there were many kinds of syphilis and its congeners, quoting Celsus, who described eight forms of venereal sores, before syphilis was discovered; he had possibly not come across Brasavolus, who, in 1536, described 234 species.

Abernethy, in his Treatise on Diseases resembling Syphilis, published in 1804, says:—

"Having been educated in the old school, under professors who prided themselves in possessing the tactus and visus eruditus, I was anxious to obtain that happy discrimination of colour that should enable me to pronounce, from its copperish tint of an eruption, that it was undoubtedly venereal. But my endeavours were ineffectual and much was I gratified by the publication of Mr. Hunter's book, which furnished me with a clue to guide me through the labyrinth in which I had been bewildered."

We cannot help feeling that the record of his cases in this work, which are so clearly and faithfully described, is the best refutation of his untenable theory that those cases were alone syphilitic which required mercury for their cure, and we can gather what immense strides have been made since his time, not in the observing and noting clinical facts, but in our powers of disentangling and applying them.

At what time after infection does induration usually appear and what is its duration?

I am unable to say from the cases I have seen as to the manner and period at which induration appears, but I suppose that in the majority of cases it commences and progresses in the same slow and insidious manner as the ulceration does and at about the same time, within three or four weeks of the time of infection.

Fournier, in his work on syphilis, quotes a number of cases of experimental inoculation, in which an average of twenty-three days elapsed.

I remember one case in which nearly eight weeks elapsed before this symptom appeared to confirm our diagnosis; and in this case secondary symptoms made their appearance at the same time.

It is this late appearance which lends countenance to the theory of mixed sores, but a mixed sore ought to appear within three days of infection, otherwise the latent period would lead to the supposition of its being only syphilitic. These cases, which are far from common, are rendered more difficult of diagnosis when the patient is accustomed to frequent and indiscriminate intercourse. I remember two similar cases of patients who came with a number of small circular ulcers (3 or 4) discharging pus, situated on the corona and furrow, unaccompanied by induration, and appearing soon after connexion, which, when

I saw them again, ten days or a fortnight later, were replaced by a large irregular indolent indurated sore in the same situation, and both were followed by well-marked secondary symptoms.

Induration may be a very transitory symptom and may even have passed away before our patient comes under observation; but, as a rule, unless proper treatment is adopted it remains for a considerable time, even after the ulcer has healed, and thus may arise the notion that a person may contract syphilis without having a primary sore, only an indurated tubercle; I do not presume to say he cannot, but I should think it extremely unlikely.

Another point with regard to induration is that it is very amenable to proper treatment, and so may have quite disappeared before the ulcer is healed, and this does not render the diagnosis easier to a second practitioner, who does not know of previous treatment. I think that the subsidence of induration is one of the best signs of successful treatment in the primary stage.

What then is the value of the presence or absence of this symptom for diagnostic purposes?

First of all, the presence of induration, as described by Hunter is conclusive evidence of syphilitic infection.

Secondly, the non-appearance of induration in a sore, within a period of four weeks from infection, will render it extremely likely that the sore is not syphilitic.

Thirdly, within this period of four weeks we can often only give a guarded and undecided opinion after weighing carefully all the evidence we can obtain by a systematic examination. This we have often to do in other forms of chronic disease, and it is neither hurtful to our patients nor discreditable to ourselves.

The Inguinal Glands.—Hardly of less importance for diagnosis than induration is the state of the inguinal glands, which unfortunately, however, correspond closely to the sore, being well marked when it is, but are often very indefinite when we most want definite symptoms. When they are well marked they remain so for a considerable time after the syphilitic sore is healed, and leave no doubt as to its nature, very rarely do they escape.

Fournier records three only out of 265, and Bassereau 25 out of 380 undoubted and well-observed cases of syphilis.[1]

The character of the glands affected is familiar to all, on the one hand is the typical group of distinct moveable almond-shaped or shotty glands in one or both groins (though not usually to the same extent in both) without signs of inflammation, no heat, redness or tenderness, having appeared insidiously, and without pain, so that the patient is not unfrequently quite unconscious of their presence.

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[1] **Fournier gives his opinion that the glands can only escape affection when the ulcer is a chancroid.**

On the other hand a single gland, quickly enlarged by subacute or acute inflammation, very tender and painful, the skin reddened and swollen, and the gland is itself fixed by effusion round it; pus soon forms, and the abscess opens or is evacuated leaving a scar, which may be of importance to diagnosis many years after, when the patient has forgotten the details of his past trouble.

The Period of Incubation.—A few carefully recorded cases will be sufficient to convince any one that patients suffering with syphilitic sores apply for treatment at a later period after infection than those with chancroids, and if in these cases the duration of the sore be subtracted from the whole period since exposure, we find that a period varying between four days and three weeks, or more, has elapsed between the date of infection and the first appearance of trouble, and this is undoubtedly a period of incubation in 11 cases I have notes of. The average period is twelve days, Diday gives fourteen days as an average in 29 cases, and Chabalier 15–18 in 90 cases.

The inquiry on this point requires great care, and is worth it.

On the other hand the chancroid commences to show itself at a much earlier period, as a gonorrhœa does, in from twelve to forty-eight hours, this being due to an inoculation of an acutely inflammatory material, the other of a specific poison, which requires time for its development and subsequent effects.

To these symptoms should be added the duration of the sore, and, lastly, any additional symptoms or complications that may help our diagnosis or modify the course of the disease. Either form of sore under a tight prepuce requires far more active treatment than when on an exposed surface, but these are matters of common surgical principles. All this requires but a few minutes for its investigation, after a little practice, and, if it does not always enable us to make a diagnosis at the first visit of our patient, it presents us with a record of facts of the greatest value, and a sure foundation on which we may be able to stand and give intelligible reasons for our opinion.

March 16.

Election of members.

Mr. Fletcher showed a child who had the greater part of his back and thighs covered thickly with dark hair, about an inch long.

The election of officers for 1882–83 was then held. There were elected:—Presidents, Mr. W. H. Jessop, Mr. Ernest Clarke; Vice-Presidents, Mr. Harper, Mr. Howe; Treasurer, Mr. Savory; Secretaries, Mr. Womack, Mr. Berry; Hon. Secretaries, Mr. H. L. Jones, Mr. Stephen Paget; Additional Committee-men, Mr. Chapman, Mr. C. J. Heath.

A vote of thanks was given to the Committee for 1881–82.

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